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JPRS ! / 10450

13 April 1982

Japan Report

(FOUO 22/82)



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ECONOMIC

JAPANESE ECONOMIC AID TO EAST, SOUTHEAST ASIA ANALYZED

Tokyo BOEKI TO KANZEI in Japanese Aug, Sep, Oct, Dec 81

[Series of articles on Japanese economic aid]

[Aug 81 pp 32-37]

[Introduction by Shigekazu Matsumoto, director of Economic Cooperation Research Office of the Institute of Asian Economic Affairs]

[Text] Japanese Economic Aid at a Turning Point

Japanese Economic Aid Under Observation at Home and Abroad; Japan Selects Path of Major Aid Giver

Recently, Japanese economic aid has been receiving attention at home and abroad. First, there is the expectation of a Japanese contribution to international society because of its status as a major economic power. Second, there is the requirement for effective economic aid which will help raise the level of welfare of the local people and give impetus to true independence and progress in the developing countries. Third, there is growing awareness that it is wise to choose the path of becoming "a major nonmilitary power" (Prime Minister Suzuki) or a "major aid-giving power" as a middle- and long-term international strategy for Japan.

Continuing from the 1970's, many changes are expected in the world, including Japan and Asia, in the 1980's. When we compare the economic indexes of the developing countries of Asia with those of the major powers--the United States, the Soviet Union, China, and Japan--there are clearly great differences (see Table 1). However, if we develop a long-term scenario for the world economy, there are at least six possible developments that we can imagine.

(1) Harmony will continue among the advanced capitalist countries. In this case, international control of trade and finance by the various countries is likely to grow.

(2) Cooperation between the advanced industrial countries will increase under the pressure of OPEC (limited protectionism). Tariff barriers, market divisions, and the creation of cartels will be employed to prevent semi-developed industrial countries from joining the ranks of advanced capitalist countries.

Table 1. Comparison of Major Economic Indexes for the Developing Countries of Asia and for the United States, the Soviet Union, China and Japan

	Indo- nesia	Malay- sia	Philip- pines	Singap- pore	Thai- land	Viet- nam	South Korea	North Korea	China	Taiwan	Japan	United States	Soviet Union
Area (in thousands of square miles)	735	128	115	0.2	198	207	38	47	3,692	14	142	3,615	8,469
Population (in millions, 1979)	148	13	48	2	46	52	38	17	971	17	116	221	258
Rate of population increase (1960-1979)	2.5	2.7	2.9	2	3.0	2.6	2.3	2.8	2.3	2.8	1.1	1.1	1.1
GNP (in billions of U.S. dollars, 1979)	34.9	20.2	29.5	8.3	27.6	3.1	61.5	6.5	245.7	26.9	1,053.3	2,343.5	537.9
Per capita national income (in U.S. dollars, 1979)	240	1,523	618	4,150	599	60	1,636	380	253	1,600	9,100	10,624	2,085
Average growth rate of GNP (1970-1979)	5.0	5.9	3.0	6.5	4.7	- 1.6	11.3	5.4	4.9	8.2	3.1	1.6	3.6
Relative weight of agriculture (percentage of GNP, 1979)	30	26	27	2	27	40	23	21	27	9	5	2	20
Relative weight of industry (percentage of GNP, 1979)	15	41	31	28	26	2	33	45	43	51	44	27	8
Government expenditures (percentage of GNP, 1979)	20	27	17	18	16	45	19	52	40	11	12	21	30
Military expenses (percentage of GNP, 1979)	3	4	3	6	4	--	6	11	9	8	1	6	12
Percentage of military expenses in total government expenditures (1979)	21	13	10	25	20	47	24	22	15	26	7	27	20
Percentage of educational expenses in total government expenditures (1979)	8	19	14	25	16	--	15	10	22	18	12	19	20
Relative weight of foreign trade (percentage of GNP, 1979)	38	79	33	189	39	17	54	20	5	83	26	16	16
Dependence on energy imports	2	--	93	100	90	30	58	10	--	72	90	20	--
Dependence on food imports	10	20	--	90	3	15	32	10	5	11	70	--	10

(Source) Asia Yearbook 1981, FAR EASTERN ECONOMIC REVIEW, Hong Kong, 1981

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(3) A new international economic order will gradually be formed. The dependence of the advanced countries on the developing countries will increase, and conflicts between the advanced countries will grow.

(4) An international order will be formed which leaves out the peripheral areas of the Third World. The elite class of the developing countries will respond to the liberal movements of the advanced countries, and there will be a widening gap between the "center and periphery" in the developing countries.

(5) A new international order will be built through horizontal ties in the Third World. This is advocated by Samir Amin [phonetic] a radical in the Third World.

(6) A revolt will occur on the periphery of the Third World. In the assessment of Yale Professor J. Scott, the revolutionary energy of agricultural classes is apparent. A revolt of Moslem peoples centering on the Moro People's Liberation Front in the Philippines could be supported by Al-Qadhdhafi and lead to the formation of an Islamic alliance.

Of these forecasts of the future, there is a possibility that a combination of (3) and (4) will actually come about during the 1980's.

Main Reasons for Reexamining Foreign Aid

When we consider this together with the trend toward multipolarization of world politics, what can be expected to happen? The following four developments are possibilities for the foreign relations strategies of the major powers--the United States, the Soviet Union, and China--in relation to the international politics of East and Southeast Asia.

(1) The United States and China could come closer together and oppose the Soviet Union. (2) The United States, the Soviet Union and China could carry out relatively equidistant foreign policies and maintain a balanced situation. (3) The Soviet Union and China could come together in opposition to the United States. (4) The United States and the Soviet Union could come together and isolate China.

The present situation is that of (1). Between now and the end of the 20th century, the situation may change to (2) as it passes from (1) to (3). The Soviet Union has military superiority over Western Europe, and is in the process of shifting the emphasis of its world strategy to Asia. China will resist this and Vietnam will oppose China. The conflicting relationship between North and South Korea and the strained relationship between Indochina and the ASEAN nations are placed in this context.

There are a number of reasons for taking a second look at the aid problem. One is the North-South problem, the increased mutual dependence of the advanced industrial countries and the developing countries since the oil shock of the fall of 1973. There is also the complication of the so-called South-South problem in which a split has occurred between the semideveloped

countries and the very poor countries. Also, international stress has reappeared in what is called the "new cold war," the new conflicts in East-West relations between the superpowers, the United States and the Soviet Union, because of the problems of Cambodia and Afghanistan.

"Economic Aid" in the Technical Sense

Strong Political Coloring

Ordinarily, when "economic aid" is discussed in the United States, Europe, or Japan, it refers to a "flow of funds" to the developing countries from both public and private sectors and includes aid, investment and trade. Here, "economic aid" is essentially something that fulfills basic human needs and contributes to the welfare of mankind and differs from overseas investment and trade by corporations for the pursuit of private gain. Technically, it means official development aid (ODA).

Official development aid may flow between two countries, between several countries or through an international organ (such as the World Bank or the Asian Development Bank). Recently there has been a trend in favor of the latter. However, under the policies of the new President of the United States, R. Reagan, bilateral aid carried out chiefly for national interest will be emphasized. Multilateral aid which passes through international organs will be cut back.

By this means, so-called economic aid will take on a markedly political character and reflect the international politics and economic conditions of an era and the internal politics of each country. Let us look at the example of the United States. The Marshall Plan (aid for European recovery) and the Point Four Plan (aid to poorly developed regions) which followed World War II were forms of humanitarian economic aid, but at the same time they also had significance as political economic aid to rebuild the U.S.-European capitalist camp to resist the threat of Soviet communism and maintain a stable supply of resources and raw materials from the developing countries for this purpose. During the greater part of the 1960's, this aid concept of the United States, based on international politics, was used to lead the free economic bloc of Europe and Japan in opposition to the East European and Soviet bloc. We can still recall that until the early 1970's, in East Asia, American military and economic aid was given to Korea, Taiwan, the Philippines, Thailand and other Southeast Asian countries in accordance with a policy of "sealing off Communist China."

Even now, American economic aid is one-fourth of the world total. The foreign aid extended by the United States since 1946, at the yen exchange rate of 1976, has reached the huge total of 123 trillion yen.¹ What led the U.S. Government and people to adopt this kind of foreign aid policy? As the debate in Japan grows over whether the present amount of aid to the developing countries is sufficient, there is a great deal for us to learn from the 30 years' experience of the United States as a major aid-giving nation.

As is well known, the foreign aid policy of the United States was a major part of its overall foreign policy, and it was carried out in accordance with a variety of goals. The following six aid concepts were formed by debate in the legislature and among the people and continue to be in effect today.²

- (1) The moral concept of aid (advocates the giving of aid without reward from the standpoint of humanitarianism)
- (2) The concept of aid for reasons of diplomacy and security (aimed at directly affecting diplomatic negotiations and security)
- (3) The concept of aid for economic profit (in pursuit of direct economic gains through the maintenance of export markets and sources of raw materials)
- (4) The concept of aid for economic development (value is placed on the process of economic development itself)
- (5) The concept of aid for political progress (given to achieve political progress in the developing countries)
- (6) The concept of aid for stabilizing relationships of mutual dependence (given to help stabilize or strengthen international relationships of mutual dependence)

MITI Version: "Present Status and Problems of Economic Cooperation"

At the end of last year, various reports giving the views of the Japanese Government on economic cooperation were published one after the other. These tentative arguments included "The Present Status and Problems of Economic Cooperation" (economic cooperation white paper), prepared by MITI, and "The Concept of Economic Cooperation: Why Should Official Development Aid Be Given?", prepared by the Ministry of Foreign Affairs, 1980 edition. MITI's economic cooperation white paper points out the changes in the environment for aid caused by the oil shock. It clearly explains how the OPEC price hike offensive spoiled the economies of nonoil-producing developing countries, as well as those of the advanced countries, causing a split between the oil-producing countries and the nonoil-producing countries in the southern Third World and causing the funds necessary for aid to be diverted to the oil-producing countries in the form of oil money. However, the report lacks concrete policies for effectively returning the funds from the oil-producing countries to the developing countries. It does not spell out what Japan's role should be in energy development aid to nonoil-producing nations. It lacks suggestions for the coordination of industry in order to deepen relationships of mutual dependence. It expounds on the significance of large-scale joint ventures with oil-producing countries such as the Iran-Japan petrochemical project for "advance protection from outside threats and harmful effects on the Japanese economy." However, there are many problems involved in Japanese-Chinese economic cooperation as seen in the Booshan steel plant construction project in Shanghai. The report appears to be lacking in suggestions for avoiding the dangers of large projects and for dealing with political and economic changes and social instability of the host country.

Foreign Ministry Version: "The Concept of Economic Cooperation"

In contrast, the Foreign Ministry's "concept" report attempts to give the reasons why Japan must increase its official development aid, in both quality and quantity, even more than the other advanced industrial countries. It includes official development aid as part of the foreign policy of a major aid-giving country and points out the special features of various aid philosophies.

For example, Sweden's foreign aid aims at creating solidarity with the Third World on the basis of a policy of active neutrality. France is enthusiastic about spreading French culture and aims at creating a Euro-African community with precedence given to French-speaking regions. On the other hand, the foreign aid policy of Great Britain has the objective of increasing the international influence of Great Britain and advancing its national interests globally by strengthening the unity of the Commonwealth. West Germany, standing in the narrow defile between East and West, is attempting to bring about a lessening of international tension by giving development help to the developing nations as well as by pursuing its policy of "Eastern diplomacy" aimed at maintaining peaceful coexistence with the Soviet Union and Eastern Europe. The greatest aid-giving country, the United States, as we have seen, has consistently pursued a policy as leader of the free world of giving aid to protect the democratic political systems in the developing countries and to maintain the security of the West.

In brief, the aid policies of the United States and the countries of Europe are backed by humanistic and moral concepts of charity, a legacy of both the Greco-Roman cultural tradition and the Christian religion. And this is clearly interwoven into the unique individual foreign policies of each country.

The Foreign Ministry report states that ODA should be given as "part of an overall security policy which contributes to the construction of an international order" based on "the moral obligation of rich nations to aid poor nations" and a "consciousness of mutual dependence between North and South." It emphasizes the "significance of aid as a means of diplomacy." It lists four factors unique to Japanese concepts of aid: (1) the cost of being a peaceful country, (2) the cost of being a major economic power, (3) protection against economic dependence on foreign countries, and (4) experience in modernization as a non-Western country.³

The problem is that our country's "comprehensive security policy" is made up of many varied elements, such as foreign policy, economics, military, and culture, and it is not at all clear where the main concern lies. Judging from the government's basic policy for next year's budget formulation following the summit meeting at which the U.S.-Japan "alliance" was proclaimed and the move toward increased defense capability at the working level meeting of the Security Affairs Committee attended by representatives of U.S. and Japanese diplomatic and defense officials, ODA will undoubtedly be included as garnishing in attempts to go along with the military expansion policy of the Reagan administration. Even though we have developed a good economic aid

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concept of our own, it will come to naught without a national consensus and a strong will on the part of the politicians to carry it out in the form of policy.

Hopeful View of a "Strong Japan"; Fearful of a "Military Power"

In Southeast Asia, the leaders of the ASEAN countries desire a "strong Japan," but the common people had bitter experiences during World War II and there remains a strongly rooted fear of Japan becoming a great military power. Prime Minister Suzuki toured the ASEAN countries in January of this year and promised that Japan "will not become a military power." Four months later, the defense of the sea lanes within 1,000 nautical miles is being undertaken and an attempt is being made to increase defense spending under a special account. So suspicions about Japan are emerging once again. Japan has been criticized by Thailand: "It is a very serious matter to developing countries if Japan cuts its foreign aid because of increased defense spending."⁴ And there has also been criticism from Singapore: "The statement that Japan will not become a military power was made only to avoid the opposition of the Japanese people and the countries of Aisa."⁵

This should prove that Japan could create an effective foreign policy for increasing Japanese influence in international politics if it could carry out effective foreign economic cooperation. Because of this, we should watch carefully the move among the main policy-determining officials toward a re-appraisal of the economic aid policy of the past 20 years, the setting of new medium-range goals to double the amount of aid given in the past 5 years over the period from 1981 to 1985 (from \$10.7 billion to \$21.4 billion), and attempts to make the aid more efficient and effective.

Turning Point in the Status of Economic Aid

The Japanese System of Separate Aid Organizations

Japanese economic aid is determined and carried out on the basis of consultation under the "four ministries and agencies" council system made up of the Ministry of Foreign Affairs, the Ministry of Finance, MITI, and the Economic Planning Agency. This is a multicomponent aid organization with authority residing in separate ministries like that of France and Holland. It could be called a multidimensional aid diplomacy system. In the Western nations, one can find "special ministry systems" as exemplified in the Economic Aid Ministry in West Germany or systems in which the aid organs are under the jurisdiction of the foreign policy organ and emphasize unification of foreign relations, as seen in the Agency for International Development (AID) which administers foreign aid as an appendage of the Department of State in the United States. It is often noted as a feature of Japanese aid diplomacy or aid cooperation administration that it depends on a system of unanimous approval for decisionmaking. Therefore, without firm policy direction and leadership at the top level, it becomes necessary to go through a long process of getting compromises and concessions between ministries and making mutual adjustments in order to reach an agreement. In other words, there are great

obstructions due to the vertical structure of the bureaucracy and the territorial consciousness of the various ministries. When this is further complicated by factionalist politics and lobbying, there is a tendency to have "foreign relations turn into domestic relations."⁶

Minister of Finance Watanabe proposed a reappraisal of official development aid in the cabinet meeting of 8 May. Raising the example of Pakistan, he asked: "Should we give economic aid to a country which has the atomic bomb?" He pointed to further problems of foreign aid: "There are cases where internal wars arise because of aid." "Often, the administrators who receive the aid build huge buildings as an expression of power and it does nothing to help the people." He was indirectly criticizing the results of economic aid to China. With respect to the problem of government investment in the Saudi petrochemical project, he brought up issues that touch on the fundamentals of policy making. "There is a trend toward collusion of bureaucrats and corporations which attempt to carry out foreign economic cooperation projects without asking for the judgment of the relevant minister." "It is scandalous for executives at the section manager level to willfully promise aid in the range of 1 to 10 billion yen."⁷

What Is the Desire of Countries Receiving Aid?

When we consider the status of economic cooperation in this time of change, the most important thing is to determine what not only the government of the target country needs but what the common people truly need and what reforms are necessary in order to carry out the kind of economic cooperation that will fulfill the desires of the people of the country receiving aid.

Looking at our record of official development aid to developing countries, we see that it amounted to \$3.304 billion, an increase of 25.3 percent over the previous year, staying in fourth place behind the United States, France, and West Germany. There was a great improvement in the percentage of the GNP, from 0.26 percent in 1979 to 0.32 percent. However, it was still well below the average of 0.37 percent for countries participating in the OECD Development Aid Committee (DAC).⁸ Japanese foreign aid cooperation became more substantial in the latter half of the 1960's. Japan provided large yen loans to Korea, Taiwan, and Indonesia, and overseas investment by corporations grew. Japan thus challenged the vested interests of the United States and Europe and intensified its economic and trade relationships with the countries of Southeast Asia (see Table 2). Of the economic aid received by the ASEAN countries from countries in the Western camp between 1971 and 1979, 30 to 50 percent was received from Japan (see Table 3). This results from the targeting of "70 percent to Asia" in Japanese aid policy. This offers an effective contrast to American, European, and Soviet aid which is aimed chiefly at Central and South America, Africa, the Middle East, and Southern Asia.

In this way, the role of Japan in foreign economic aid to the countries of Southeast Asia is becoming more and more important. The leaders of the ASEAN countries are attempting to create domestic political stability by expanding the political and economic pipeline to Japan. In particular, they are seeking to achieve economic security in all areas, including aid, investment and trade.

Table 2. The Position of Japan in the Foreign Economic Relations of ASEAN Nations

		(Unit: percent)				
	Country	Thai-land	Malay-sia	Singa-pore	Indo-nesia	Philip-pines
	Year					
Share of official development aid from Japan in foreign aid	1973	55.7	39.0	15.2	27.6	66.3
	1975	72.9	89.9	76.5	37.6	95.7
	1977	39.1	41.4	66.7	28.8	16.7
	1979	45.9	59.6	27.3	31.5	33.4
Japanese share of private foreign investment	1973	37.6	10.0	6.0	20.2	1.1
	1975	38.5	21.3	13.4	43.0	17.5
	1977	34.7	26.7	25.3	39.0	15.3
	1979	34.2	24.8*	16.5	35.6	22.7
Japanese share of foreign trade	1973	31.6	20.1	14.0	41.9	32.6
	1975	30.5	17.0	13.6	38.8	31.2
	1977	26.9	21.7	14.0	35.4	24.3
	1979	23.9	23.8	14.0	40.7	24.8

* 1978

(Source) DAC, MITI, "Present Status and Problems of Economic Cooperation," 1974-1978; JETRO "Overseas Market White Paper," supplement "Status of Overseas Investment," 1974, 1976, 1979; and JETRO, "Overseas Market White Paper--Investment Section," 1981 (February 1981).

Prime Minister Suzuki gave a speech in Bangkok on 19 January this year incorporating the results of his tour of the ASEAN countries. In it he stated: "Deepening the friendly relationship with the ASEAN countries is a fundamental of Japanese foreign policy." He announced that the important fields of future economic aid to the ASEAN region would be: (1) development and promotion of agriculture, (2) energy development, (3) promotion of job training, and (4) promotion of small and medium enterprises. The evaluation of Japanese economic aid by the countries of Southeast Asia is fairly evenly split between pluses and minuses, but the ratings of the rulers and the ordinary people do not always coincide. Some of the possible reasons for this are as follows. The common people of the developing countries have relatively little opportunity to see or hear about the economic aid projects where the money goes to the building of the social and economic infrastructure such as irrigation, electrification, or the installation of water and sewer systems in rural villages. Even if a project is known to be Japanese, the government elite are very proud and, while they may advertise their own accomplishments,

Table 3. Development Aid to ASEAN Nations by the Major Advanced Nations
(1971-1979)

(Based on expenditures, in millions of U.S. dollars)							
Donor Countries	Recipient Countries	Indonesia	Philippines	Thailand	Malaysia	Singapore	Total
Japan	Amount	1,691.2	688.6	502.4	337.6	58.4	3,278.2
	Percent of total	33.4	48.9	53.6	56.8	39.7	40.3
United States	Amount	1,401.0	543.0	148.0	26.0	1.0	2,119.0
	Percent of total	27.0	28.5	15.8	0.04	0.01	26.0
West Germany	Amount	439.0	60.3	102.2	35.4	15.8	636.6
	Percent of total	0.09	4.27	10.9	0.06	0.11	0.08
Netherlands	Amount	480.1	19.2	17.8	5.1	1.9	524.1
	Percent of total	0.09	0.01	0.02	--	0.01	0.06
Australia	Amount	269.3	44.9	62.1	43.1	8.3	427.7
	Percent of total	0.05	0.03	0.07	0.07	5.6	0.05
United Kingdom	Amount	128.2	3.5	25.1	86.0	57.3	300.1
	Percent of total	0.03	--	0.03	14.5	39.0	0.04
Subtotal		4,409.7	1,359.5	857.6	533.2	142.7	7,302.7
Total of all aid		5,055.5	1,409.5	936.7	594.3	147.1	8,143.1

(Source) Compiled from OECD, "Geographical Distribution of Financial Flows to Developing Countries" 1976-1979, Paris 1980.

they will not take a posture of dependence on a foreign country that would invite anti-establishment criticism (examples include Korea and the Philippines).

The countries of Southeast Asia have expanded employment and raised the income of their people through an industrialization strategy based on foreign capital and have pursued a development policy of bringing the ripple effects of modernization from the cities to rural society. However, the activities of foreign private enterprise appear mainly in the major cities and are more directly visible to the common people through the spread of consumption (food products, clothing, electrical products, automobiles, etc). The fierce student protest movements which occurred in Thailand and Indonesia during the

visit of Prime Minister Tanaka to Southeast Asia in 1974 were not unrelated to this "excessive advance" of foreign industry. It was an explosion of dissatisfaction with the unequal economic development carried out by the authoritarian governments of these countries, the suppression of human rights, and the instability of life.

More Active Research by Local Scholars

In recent researchers and scholars of Southeast Asian countries, as well as those of Korea, have been actively studying and analyzing Japan's economic aid, private investment, trade, and industrial policies. The results will influence local politics and the people's view of Japan. However, analysis of the economic effects of aid and research on the social and political situation by local scholars and even those of Japan are still insufficient.⁹

The economic development desired by the peoples of Southeast Asia includes the establishment of native industry by utilizing local resources and abilities of local people, self-sufficiency in food production on an agricultural basis, expansion of employment, stabilization of the international balance of trade payments, elimination of poverty, and improvement of the standard of living.

Japanese economic aid to Thailand includes rather large yen loans, and a mutually beneficial, friendly relationship is hoped for. However, a survey of Thai attitudes toward Japan¹⁰ (made by Chulalongkorn University in 1978) showed the following: (1) 45.7 percent of the general populace (45.1 percent in a previous survey in 1974) and 68 percent of the elite (65 percent in previous survey) believed that Japanese economic aid was given for the benefit of Japan; (2) 20.7 percent of the general populace and 25.8 percent of the elite thought that it was given for the benefit of both countries; (3) 8.4 percent of the general populace (7.3 percent in previous survey) and 2.3 percent of the elite (2.0 percent in previous survey) thought that it was given to help Thailand. So we see that the intensification of the economic relationship between Thailand and Japan does not necessarily have a good effect on the perception of Japan by the common people or the elite. In Thailand, the bureaucrats, intellectuals, and students, those who have received a higher education, are the most severe critics of the Japanese and, oddly, rather friendly toward China.

Strong Claims by the Southern Nations

The elite of Southeast Asia are mostly products of American or European education. The exchange not only of political leaders but also of military officers, scholars, and journalists has increased the human connections between the ASEAN nations, reflecting a shared consciousness. The recent trend is for Southeast Asians not to lean toward the United States, Europe, Japan, or any particular country but to work together to control the influence of any major nation, including China, from outside the region and to establish a relatively independent policy line. At U.S.-European-Southeast Asian international conferences held in Jakarta and Singapore, strong Third World claims were heard even from the moderates of the South.

"The present international order has failed to improve the standard of living of the countries of the South. Indeed, the inequality in wealth between the advanced nations and the developing nations has reached a ratio of 35:1. A situation is being created in which the ratio will reach 45:1 in the mid-1980's." "In order to promote a reform of the international order, it is necessary for us to participate equally in international policy making."¹¹

"The failure of American aid to the Philippines is due to ignoring the local society and culture. Eighty percent of the agricultural technology aid from the AID was used for salaries and service fees paid to American personnel. Japan considers war reparations to be aid. It offered a yen loan for part of a trans-Philippine highway and called it the 'Japan-Philippines Friendship Highway.'¹²

The nations of Southeast Asia are interested in the self-regeneration theories of Mao Zedong and development policies emphasizing agriculture because of concern about dependence on foreign capital as a strategy for economic development. At present, China has begun to use foreign loans and import advanced technology and equipment as a method of modernization. However, among the elite class of Southeast Asia, there is a firmly rooted idea that it is necessary to introduce reform in agriculture and among the farming population and build up small-scale industrial technology using local resources and manpower.¹³ Therefore, aid from the advanced countries from now on will be selectively accepted when it is useful in these terms. For this reason, it is certainly to be hoped that the four-point Asian economic aid policy announced by Prime Minister Suzuki will be put into practice.

The economic and social development of the developing regions of the Middle East, Africa, and Latin America, as well as Asia, cannot succeed, no matter how much foreign aid and private investment is poured in, without methods and policies which take into account the country's own natural, social, and economic conditions and utilize the special features of the region. When the Soviet Union joined the aid competition in the 1960's, it is said to have sent Russel snowplows to Guinea in tropical Africa and to have left cement out in the rain during the monsoon season in Burma.

"The sincerity of the aid-giving country depends on whether it plans to fulfill 'basic needs,' help to eliminate general poverty, in addition to aid for general development programs" (United Nations University President Sujatomoko [phonetic]). Future Japanese aid should maintain a posture of giving priority to basic items for improving the living standards of the poor common people, such as residential electrification, medical services, and education, even though the leaders and privileged classes want things like color television and automobiles. At the same time, private funds, knowledge, and manpower must be mobilized in order to make the giving of aid more efficient and systematic. Two successful examples of aid in new fields through a third sector, or through public and private cooperation, are the ASEAN industrial linkage chart project, carried out jointly by the Asia Economic Research Institute and the economic planning bureaus and central statistics bureaus of the ASEAN countries, and the activities of the Japan Energy Economics Research Institute in providing technical cooperation to the Indonesian energy supply-and-demand data bank. Although there is a

difference in the size and object of these programs, they are both given high marks by the people involved in the partner countries as unique methods of cooperation in activities that are fundamental to the formation of important policies in the developing countries.¹⁴

In this series we will look at the deep relationship between Japan and the developing countries. Besides analyzing the character of past economic aid we will examine how it is evaluated by the recipient countries. Making comparisons with the United States and Europe, the kind of aid that is desirable in the future will be discussed in light of present circumstances and economic plans in the various countries.

FOOTNOTES

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2. Ibid., section 2.
3. Ministry of Foreign Affairs Economic Cooperation Bureau and Economic Cooperation Research Council, "Keizai Kyoryoku no Rinen--Seifu Kaihatsu Enjo wa Naze Okonau no Ka" [The Concept of Economic Cooperation--Why Should Official Development Aid Be Given?] (International Cooperation Promotion Association, December 1980), pp 76-84.
4. NIHON KEIZAI SHIMBUN, 13 May 1981.
5. ASAHI SHIMBUN, 20 June 1981.
6. Shigekazu Matsumoto, "Nihon no Toran Ajia Keizai Enjo to Sono Seiji Rikigaku" [Japanese Economic Aid to Southeast Asia and Its Political Dynamics], (Japan International Political Science Association), "Kokusai Keizai no Seijigaku" [The Political Science of International Economics], May 1980, pages 65-66. Kazuo Shishido, "Enjo Taikoku Nippon no Sentaku" [The Choice of Japan as a Major Aid-Giving Country] (TOYO KEIZAI SHINPOSHA, March 1981), pp 157-158.
7. MAINICHI SHIMBUN, 9 May 1981; YOMIURI SHIMBUN, 9 May 1981; ASAHI SHIMBUN, 23 May 1981.
8. MAINICHI SHIMBUN, 16 May 1981.
9. Matsumoto, ibid., pp 120-123.
10. "Japan in Thai Perspective," Asian Studies Monographs, No 026, Institute of Asian Studies, Chulalongkorn University, Thailand, January 1980, pp 59-61.
11. "Southeast Asia and the World of Tomorrow," Center for Strategic and International Studies, Jakarta, Indonesia, August 1977, pp 218-220.

12. "Southeast Asian Perceptions of Foreign Assistance," edited by Lim Joo-Jock and Christine Tan, Institute of Southeast Asian Studies, Singapore, in cooperation with Institute of Asian Studies, Chulalongkorn University, Bangkok, 1977, pp 172-173.
13. Ibid., pp 172-173.
14. Takao Tomidate, et al., "Ajia Shokoku no Enerugi Mondai" [The Energy Problems of the Countries of Asia] (paperback edition, Institute of Asian Economic Affairs, March 1981), pp 175-189.

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[Article by Noguyoshi Nishizawa on aid to Burma]

[Excerpt] Let us look at the aid (based on net disbursements) given to Burma by the advanced nations and international organizations. First, bilateral aid. From 1971 to 1979 the cumulative total of such aid was \$743.9 million. Of this, \$266.1 million was in grants (\$60.5 million in technological cooperation) and \$477.5 million was in loans. Thus, loans made up two-thirds of the bilateral aid to Burma, but the countries making the loans were limited in number. Besides Japan, they included West Germany and Canada. Looking at the amount of bilateral aid, we see that Japan is far in the lead with \$510 million. Next is West Germany with \$108 million. These two countries together account for by far the greatest part, 83 percent, of the cumulative total. This may be due to the fact that Burma has a high regard for the economic strength and the industrial technological strength of these two countries and sees them generally as not having particular political ambitions with regard to Burma. To Burma, which strongly maintains a position of strict nonaligned neutrality, the factor is very significant.

After these two countries comes Australia, Canada, and Great Britain with about \$200 million, and the United States and the Netherlands with about \$150 million (cumulative totals). However, some new trends should be noted. Aid from the socialist countries of Eastern Europe such as Czechoslovakia and Yugoslavia has greatly increased. There is a dramatic increase in aid from China, where similar improvements are being made. Although the United States has been critical of the Ne Win government, it has become concerned about recent changes in Indonesia and the stability of Burmese politics and its economy, and it has declared its intention of again providing substantial aid.

Some special features of the aid are that all aid from Australia, Great Britain and the United States is freely granted, and the terms of loans made by West Germany and Canada are softer than those for loans made by Japan. For example, West Germany gave very good terms, a repayment period of 50 years and 0.75 percent interest on the loan made for the Nyanjat [phonetic] Dam construction project which it committed itself to in 1980. In numbers, the Japanese share of the grant element (G/E) of total aid is about the same as that of West Germany. However, when we consider the fact that there are various kinds of reparations and quasi-reparations included in Japanese grants,

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we have to admit that the G/E for general aid is quite low. As mentioned previously, the total amount of aid given by Japan is much larger than that of any other country, and it is possible to see the poor loan terms as compensating for that.

Next, let us survey the special features of aid from each country, beginning with West Germany. West German aid is aimed chiefly at mining and industry. Some of the main items are a chemical fertilizer plant, the Bassein plate glass plant, restoration of the Bawdsin mine, a soda ash plant, expansion of the Heinder [phonetic] tin mine, a natural gas liquefaction plant, and the Chun Choun [phonetic] urea fertilizer plant. Recently, it has reportedly placed emphasis on development of energy resources as well. However, no agreement has been reached for petroleum development, in spite of the urgent demand from the Burmese side.

Special features of this aid are a general emphasis on continuity and the provision of product loans and the care taken not to create obstacles to the supply of raw materials and parts. Emphasis is also placed on technology transfer. A technological training center was opened under the No 2 Ministry of Industry, and technicians and supervisors are being stationed permanently in Burma to give technological guidance. Also, West Germany has the best record in aid related to technological assistance. The total of its technological assistance from 1971 to 1979 was \$258 million. Canada was in second place but far behind (\$110 million).

Australia's total aid of \$21.8 million is not a very large figure, but the fact that it is all a free grant is an important feature. The main object of this aid is the infrastructure, and in this field, Australia has a long record of achievement in road construction and repair. In addition, it is carrying out a rural water supply project together with UNICEF. In agriculture-related projects, it is building irrigation systems and rice storehouses.

The aid to Burma from international organizations in the period from 1971 to 1979 reached a total of \$347.5 million. This was about one-third of the total amount of aid (the sum of aid from single countries and from international organizations). The major international aid organizations are the International Development Association (IDA) of the World Bank, the Asian Development Bank (ADB), and the various United Nations organizations. The total aid from the IDA was \$115.2 million, the next largest amount of aid after that of Japan. Burma went back to accepting aid from the World Bank in 1973. This aid has continued to increase steadily since that time and has played a major role in Burma's economic development. IDA aid is mainly given for agriculture and transportation. These two fields account for about two-thirds of the IDA aid. In the future, the uses of IDA aid will be expanded to include fishing, mining, and electric power. The loan terms are extremely lenient. For the Nyanat [phonetic] Dam project, which was committed to in 1980, the repayment period is 50 years, with a grace period of 10 years, and no interest is required. Also, the amount of the loan for this project (\$90 million) is the largest of any World Bank aid projects in Burma.

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The total amount of ADB aid is \$96.4 million, about the same as that of West Germany. The special feature of the ADB aid is that it extends over a relatively wide variety of fields. In comparison with the IDA, which emphasizes aid for agricultural development, the ADB emphasizes industrial fields.

3. Japanese Aid to Burma

As I have mentioned, Japan is the largest source of aid to Burma. Japanese aid to Burma began with free financial assistance based on the reparations agreement which went into effect in April 1955. Since then, Japan has continued to provide large amounts of financial and technological assistance. The total of official financial assistance to Burma between 1955 and the end of December 1980 (based on official documents exchanged) has reached a total of 311.9 billion yen. Of this, 45.5 percent, or 141.96 billion yen, is uncompensated assistance, and the remaining 169.98 billion yen is compensated assistance.

(1) Uncompensated Financial Cooperation

Uncompensated financial assistance to Burma can be roughly broken down into (1) reparations, (2) quasi-reparations, and (3) miscellaneous aid. Reparations are based on the reparations pact signed in November 1954 and they were paid over a 10-year period from April 1955 to April 1965. The main projects for which reparations were used were: (1) the Baloochan [phonetic] hydroelectric power plant (output of 84 MW), (2) the so-called "old four" industrial projects (light rolling stock manufacturing, heavy rolling stock manufacturing, farm tool and equipment manufacturing, and electrical equipment manufacturing), and (3) purchase of machinery and transportation equipment. The reparations payments were used as follows: 10.4 billion yen went to the Baloochan [phonetic] hydroelectric power plant, 10.5 billion yen to the "old four" projects, and 51.1 billion yen to other projects. The Baloochan [phonetic] hydroelectric power plant is still the largest source of electric power in Burma and it plays a very large role in the industrialization of Burma and the supply of private electric power. Also, the "old four" projects can be said to have built the foundations for the further industrialization of Burma.

However, in 1973 Japan considered a request by the Burmese Government for re-evaluation of a comparative imbalance in the reparations to Burma as compared with that to other countries, and a new economic and technological cooperation agreement was concluded. On the basis of this agreement, a total of 47.34 billion yen in uncompensated assistance was provided over a 7-year period from April 1965 to 1972. This is what is referred to as "quasi-reparations." The main project funded by these quasi-reparations was an expansion of the "old four" projects. The amount invested in this was 432.9 billion yen.

Following the reparations and quasi-reparations, ordinary uncompensated assistance was given continuously after 1975. The total of this assistance reached 226.3 billion yen by December 1980. This was made up mainly of general grants and aid for increased food production a 7:3 ratio. Large amounts came out of the general grants for a biomedical research center (3.5 billion yen) and a metallurgy research center (2 billion yen). The aid

for increased food production was spent for supply of fertilizer, farming tools and equipment, and methods to increase rice harvests. This coincides with the Burmese Government's policy emphasis on agricultural development and enjoys a good reputation.

(2) Compensated Financial Cooperation

Compensated financial assistance to Burma was started in February 1969. By the end of December 1980 the total value of loans had reached 170 billion yen. Of this, 108.4 billion yen (63.7 percent) went to project aid and 61.6 billion yen (36.3 percent) went for commodity aid. An interest rate of 3 percent was applied up to the eighth yen loan (excluding the first and seventh yen loans). After that it was gradually reduced. From 1979 on, the rate was 2.25 percent. The repayment period before 1977 was 25 years and after that it was changed to 30 years. So the terms of the loans have improved slightly. However, as observed previously, these lending terms are poorer than those of other countries and international organizations.

The object of compensated financial assistance is mainly industrial and energy resource development. In the industrial field, a large amount of aid is continuously received for the four industrialization projects. The total loan amount, including both project and commodity loans, is 45.34 billion yen, about one-third of the total compensated financial cooperation. Aid has been given continuously for a variety of purposes in the four projects throughout the postwar period, beginning with the payment of reparations. A production system was finally established, and certainly a great contribution was made in such areas as the supply of products within the country, industrial technology transfers, and expansion of employment. However, it is also true that some problems exist. The first of these is that because aid has been perpetuated, there is a lack of effort for autonomous progress, and a system that can pay for itself without aid has not been established. The second problem is that these industries have not yet been transformed into export industries, as originally planned by the Burmese Government. And there are other problems that can be pointed out. A great deal of rationalization extending to all aspects of business operations is required to solve these problems. And from now on, aid will be necessary in "soft" areas such as management, information, and marketing.

Other major industrial projects include construction of a ceramic products manufacturing works, the Bagasu [phonetic] pulp and paper mill, a cement plant, and a rice mill. There are also some energy-related industrial projects, such as a natural gas turbine power plant (fourth yen loan), the Syrian oil refinery expansion project (eighth yen loan), and the Man oil refinery. For energy resource development, a test drilling for oil was made off the Gulf of Martaban with the sixth yen loan in 1973. And a yen loan was made in 1980 for offshore oil field development. Of course, this large amount of energy-related financial cooperation has been provided because of the increase in the price of crude oil in recent years brought about by the energy crisis. It is also due to the fact that Burma has very promising drilling areas, and the Burmese Government is making a determined effort to develop energy resources in order to export petroleum and gain foreign currency.

Table 1. Major Economic Indexes for Burma

	Units	1970/71	71/72	72/73	73/74	74/75	75/76	76/77	77/78	78/79	79/80
(1) Gross domestic product	(100,000 K)	104,371	107,715	117,346	146,997	193,475	234,773	274,273	296,175	315,213	343,195
(2) Gross domestic product ^①	(100,000 K)	103,881	106,407	105,377	108,117	111,011	115,617	122,653	129,957	137,810	146,470
(3) Real growth rate	(percent)	4.1	2.4	-1.0	2.6	2.7	4.1	6.1	6.0	6.0	6.3
(4) Imports	(100,000 K)	8,521	9,214	7,042	5,749	10,158	14,433	16,279	20,865	30,121	45,606
(5) Exports	(100,000 K)	5,845	6,643	6,797	9,527	9,116	11,916	14,144	17,278	18,423	26,513
(6) Trade payment	(100,000 K)	-2,676	-2,571	-245	3,778	-1,042	-2,517	-2,135	-3,587	-11,698	-19,093
(7) Investment	(100,000 K)	10,560	11,842	11,111	11,456	15,245	16,807	23,204	37,526	53,747	77,861
(8) Consumption	(100,000 K)	94,738	97,116	104,925	128,240	174,520	213,893	248,050	261,320	269,512	283,716
(9) Rate of investment ^②	(percent)	10.1	11.0	9.5	7.8	7.9	7.2	8.5	12.7	17.1	22.7
(10) Percentage of foreign trade	(percent)	13.8	14.7	11.8	10.4	10.0	11.2	11.1	12.9	15.4	21.0
(11) Repayment of foreign debt	(\$1 million)	--	--	--	--	--	--	34	33	47	91
(12) Export amount	(")	--	--	--	--	--	--	216	262	260	431
(13) DSR ^③	(percent)	--	--	--	--	--	--	15.7	12.6	18.1	24.5

Notes: ^① According to figures for 1969-1970; other figures are current. ^② The investment rate is investment divided by the GDP. ^③ The foreign trade rate is imports plus exports divided by the GDP. ^④ DSR (debt service ratio) is the foreign debt repayment amount divided by the export amount.

Source: Items (1)-(10) are from Ministry of Planning and Finance, "Report of the Pyrrhu Hluttaw" (1980/81) pp 19, 20. Items (11)-(13) are from Ministry of Planning and Finance documents.

Table 2. Aid to Burma From Advanced Nations and International Organizations (1971-79) (based on net disbursements, in millions of dollars)

		(1)										(2)									
		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19			
1971	20	16.6	1.0	1.7	2.2	1.0	0.6	—	—	—	22.8	—	—	—	2.7	—	2.7	25.5			
	21	0.2	1.0	1.2	0.1	—	0.6	—	—	—	—	—	—	—	—	—	—	15.4			
	22	9.9	8.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	22			
	23	26.7	4.5	1.2	2.2	1.0	0.6	—	—	—	38.2	—	—	—	2.7	—	2.7	40.9			
1972	20	18.0	1.2	1.4	0.6	2.0	0.7	—	0.2	—	0.1	24.2	—	—	6.1	—	6.1	28.3			
	21	1.7	1.2	0.4	0.1	—	0.7	—	—	—	0.1	4.2	—	—	—	—	—	4.1			
	22	11.6	3.3	—	—	—	—	—	1.1	—	—	16.0	—	—	—	—	—	14.3			
	23	29.8	4.5	1.4	0.6	2.0	0.7	1.1	0.8	—	0.1	40.2	—	—	6.1	—	6.1	44.3			
1973	20	14.4	1.5	1.1	1.9	—	0.8	—	0.1	—	—	19.8	—	—	3.9	—	3.9	23			
	21	1.2	1.5	0.4	0.2	—	0.6	—	—	—	—	—	—	—	—	—	—	2.9			
	22	41.9	3.5	—	—	—	—	—	1.7	—	—	47.1	—	—	—	—	—	47.1			
	23	56.3	5.0	1.1	1.9	—	0.8	1.7	0.1	—	—	66.8	—	—	3.9	—	3.9	70.8			
1974	20	12.1	3.0	4.0	1.3	—	1.5	—	—	—	—	22.0	—	—	5.6	—	5.6	27.6			
	21	1.5	3.0	0.4	0.2	—	1.5	—	—	—	—	0.6	—	—	5.6	—	5.6	12.2			
	22	34.2	3.8	—	—	—	—	—	—	—	—	37.8	1.9	—	—	—	—	1.9			
	23	26.4	6.8	1.0	1.3	—	1.5	—	—	—	0.1	59.9	1.9	—	5.6	—	5.6	67.4			
1975	20	18.4	2.1	3.0	0.5	—	1.0	—	—	—	0.1	23.1	—	—	10.0	0.2	10.2	33.3			
	21	2.3	2.1	0.9	0.1	—	1.0	—	—	—	0.1	—	—	—	8.5	—	8.5	15.0			
	22	5.2	0.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
	23	21.6	3.0	3.0	0.5	—	1.0	—	0.2	—	0.1	29.0	15.9	3.0	10.0	0.2	29.1	58.1			
1976	20	15.3	5.3	2.8	1.3	—	1.5	—	—	—	0.1	0.7	26.5	—	0.4	6.9	0.9	8.2			
	21	5.3	0.6	0.1	—	—	0.7	—	—	—	—	—	—	—	—	—	—	7.3			
	22	12.0	0.2	—	0.3	—	—	—	—	—	—	0.1	0.2	10.1	—	0.4	4.9	—			
	23	27.3	5.2	2.8	1.8	—	1.5	0.4	—	0.1	0.2	39.3	18.3	5.6	6.9	0.9	31.7	71.4			
1977	20	11.3	3.5	2.1	1.4	9.0	4.3	—	—	—	0.2	0.1	0.1	37.0	—	—	—	41.1			
	21	1.4	3.5	0.3	0.1	—	0.6	—	—	—	—	0.1	0.1	0.1	6.2	—	0.8	2.7	—		
	22	9.2	6.0	—	4.8	—	—	—	—	—	—	22.5	19.3	8.9	—	9.7	37.9	60.4			
	23	20.6	9.6	2.1	6.2	9.0	4.3	2.5	0.2	0.1	0.1	54.7	19.2	9.6	7.7	10.3	46.9	101.6			
1978	20	19.6	3.6	6.7	2.5	2.0	2.6	—	—	—	0.1	13.3	0.9	42.5	—	—	—	9.8	17.8		
	21	2.7	3.6	0.2	0.1	—	0.7	—	—	—	0.1	0.1	0.3	6.0	—	—	—	105.7	220.1		
	22	91.4	12.0	—	0.2	—	—	—	—	—	—	—	—	—	—	—	—	11.2	53.8		
	23	104.0	15.8	6.7	2.7	2.0	2.6	3.3	0.1	13.3	6.4	11.9	25.0	57.6	9.9	24.6	117.1	274.0			
1979	20	30.0	4.4	7.4	3.5	—	6.0	—	—	—	0.1	0.8	1.0	51.2	—	—	—	23.2	78.4		
	21	5.0	4.4	0.2	0.1	—	1.3	—	—	—	—	—	—	—	—	—	—	19.2	30.9		
	22	148.0	47.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	81.4	227.3		
	23	176.0	51.8	7.4	4.4	—	6.0	—	0.3	0.1	0.8	11.0	51.2	31.8	20.6	22.2	25.0	104.5	282.9		
1979	20	144.9	25.6	21.6	15.2	14.0	19.0	—	—	—	0.7	14.4	10.5	26.1	—	—	—	75.3	184.4		
	21	7.7	25.8	4.8	11.0	—	7.6	—	—	—	—	—	—	—	—	—	—	89.6	236.1		
	22	365.4	62.2	—	6.4	—	—	—	—	—	—	—	—	—	—	—	—	78.3	248.4		
	23	510.3	108.0	21.6	21.6	14.0	19.0	8.3	0.7	14.4	26.0	743.9	115.2	—	—	—	—	266.3	812.7		

Source: 1971-77, Ministry of Foreign Affairs, "Economic Assistance Reference Materials by Country (Burma)," p 40. 1978, 1979, OECD, "Geographical Distribution of Financial Flows to Developing Countries," pp 34, 35.

Key:

- | | |
|---------------------------------|---|
| (1) Country-to-country | (13) Country-to-country subtotal |
| (2) International organizations | (14) IDA |
| (3) Japan | (15) ADB |
| (4) West Germany | (16) UN |
| (5) Australia | (17) Others |
| (6) Canada | (18) International organizations subtotal |
| (7) United States | (19) Total |
| (8) United Kingdom | (20) Grants |
| (9) France | (21) Technical assistance portion |
| (10) New Zealand | (22) Loans |
| (11) Netherlands | (23) Total (20-23 are the same for each year) |
| (12) Others | |

Table 3. Government Financial Assistance to Burma from Japan (based on exchange of official documents, as of the end of December 1980)
(in millions of yen)

Year	76	77	78	79	80*	Total
Uncompensated assistance	120,645	2,154	5,130	7,531	6,503	141,963
Reparations	72,000	--	--	--	--	72,000
Quasi-reparations	47,336	--	--	--	--	47,336
General grants	1,300	1,500	3,200	5,000	4,373	15,373
Cultural grants	9	54	30	--	30	123
Assistance for increased food production	--	600	1,900	2,000	2,100	6,600
Debt relief assistance	--	--	--	531	--	531
Compensated assistance	66,730	28,540	16,250	26,960	31,500	169,980
Project assistance	50,990	19,540	2,750	12,730	22,350	108,360
Commodity assistance	15,740	9,000	13,500	14,230	9,150	61,620
Total	187,375	30,694	21,380	34,491	38,003	311,943

Source: MITI, "Present Status and Problems of Economic Cooperation," p 419

Table 4. Japanese Financial Assistance to Burma

① Uncompensated Assistance (as of the end of December 1980)
(based on exchange of official documents)

Date of Agreement	Projects	Amount	Note
	(Reparations)		
	Baloochan [phonetic] hydroelectric power plant	10,389	*
54-4-16	Light rolling stock manufacturing plant 3,295	3,295	*
5	Heavy rolling stock manufacturing plant	2,530	*
65-4-15	Agricultural equipment manufacturing plant	1,589	*
	Electrical equipment manufacturing plant	3,095	*
	Machinery, transportation equipment	30,694	*
	Other projects	20,408	*
	(Quasi-reparations)		
	Baloochan [phonetic] hydroelectric power plant	18	*
65-4-16	Light rolling stock manufacturing plant	6,992	*
5	Heavy rolling stock manufacturing plant	14,107	*
72-4-15	Agricultural equipment manufacturing plant	9,550	*
	Electrical equipment manufacturing plant	12,644	*
	Machinery	665	*
	Other items	3,360	*
	(General Uncompensated Assistance)		
75-8-16	Biomedical research center 1	700	*
76-10-9	Telephone equipment and telephone circuit networks	600	*
77-7-12	Biomedical research center 2	1,500	*
78-8-28	Biomedical research center 3	1,300	*
"	Job training equipment and materials for regional junior colleges	500	
78-10/17	Project 1 for free distribution of school children's uniforms (textiles)	600	*
78-12-15	Bridge construction project (small steel rods)	500	*
78-12-26	Project 2 for free distribution of school children's uniforms (textiles)	300	*
79-4-18	Low income housing project (galvanized) steel sheets	600	
79-7-26	Technical high school education improvement project	700	
"	Metallurgy Research Center	2,000	
"	Medical facilities construction project	600	
79-11-9	Public utilities construction project	1,100	
80-6-18	Pharmaceutical research and development center	2,000	
80-8-28	Public utilities construction project	1,000	
"	Southern Nawin [phonetic] region terminal irrigation drainage facilities	873	
"	Bridge construction project	500	

[Table continued]

[Continuation of Table 4]

Date of Agreement	Projects	Amount	Note
	(Cultural Grants)		
77-1-17	Equipment and materials for preservation of cultural properties by Ministry of Culture	9	*
77-7-18	Light and sound facilities for Rangoon outdoor theater	29	*
78-2-9	Equipment and materials for restoration of Pagan ruins	25	*
78-8-29	Light and sound facilities for Jubilee National Theater	30	
80-11-12	Materials for microorganism laboratory at Rangoon University of Humanities and Science	30	
	(Aid for Increased Production of Food)		
78-2-28	Fertilizer, agricultural equipment, agrichemicals	600	*
78-10-18	Fertilizer, agricultural equipment	1,100	*
78-11-30	Fertilizer	800	*
79-11-9	Fertilizer	2,000	
80-11-12	Fertilizer, agriculture, agricultural equipment	2,100	
	(Debt Relief Grants)		
79-9-14	General commodity purchases	240	*
80-3-28	General commodity purchases	291	

* Completed

② Compensated Assistance (as of the end of December 1980)

A (Based on exchange of official documents) (in millions of yen)

Date of Agreement	Assistance	Amount	Organ	Inter-est	Term	Type	Note
	(Yen loan)						
69-2-15	1st yen loan	10,800	Fund	3.50	20(5)	1	
71-8-4	2d yen loan	3,600	"	3.00	25(7)	1	⊙
72-3-10	3d yen loan	4,620	"	3.00	25(7)	2	
72-8-22	4th yen loan	20,160	"	3.00	25(7)	1	
73-2-2	5th yen loan	3,080	"	3.00	25(7)	1	⊙
73-7-27	6th yen loan (I)	4,620	"	3.00	25(7)	2	
"	6th yen loan (II)	7,000	"	3.00	25(7)	1	
75-6-18	7th yen loan	6,500	"	2.75	30(10)	2	o
76-11-26	8th yen loan	29,950	"	3.00	25(7)	1	
"	4th yen loan	Δ16,600	"	3.00	25(7)	1	
"	6th yen loan (II)	Δ 7,000	"	3.00	25(7)	1	

[Table continued]

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[Continuation of Table 4 (2) A]

Date of Agreement	Assistance	Amount	Organ	Inter-est	Term	Type	Note
77-6-21	9th yen Loan (I)	2,000	Fund	2.75	30(10)	2	o
"	9th yen loan (II)	7,000	"	2.75	30(10)	2	o
"	9th yen loan (III)	19,540	"	2.75	30(10)	1	o
78-10-20	9th yen loan (IV)	8,000	"	2.75	30(10)	2	o
"	10th yen loan (I)	2,150	"	2.50	30(10)	2	o
"	10th yen loan (II)	3,350	"	2.50	30(10)	2	o
78-12-27	Special yen loan (III)	2,750	"	2.50	30(10)	1	o
79-11-20	9th yen loan (V)	11,730	"	2.25	30(10)	2	o
"	11th yen loan (I)	2,500	"	2.25	30(10)	2	o
"	11th yen loan (II)	12,730	"	2.25	30(10)	1	o
80-10-31	12th yen loan (I)	22,350	"	2.25	30(10)	1	o
"	11th yen loan (II) [sic]	9,150	"	2.25	30(10)	2	o

B (based on loan agreement) (in millions of yen)

Date of Agreement	Aid	Amount	Note
	(Yen loan)		
	(Commodity Assistance)		
72-4-20	Commodity assistance (3d yen loan)	4,620	*
73-9-28	Commodity assistance (6th yen loan)	4,620	*
75-8-20	Commodity assistance (7th yen loan)	6,500	*
77-7-15	Commodity assistance (9th yen loan I)	2,000	*
"	Commodity assistance (9th yen loan II)	7,000	*
78-12-19	Commodity assistance (9th yen loan IV)	8,000	*
"	Commodity assistance (10th yen loan I)	2,150	*
78-12-19	Commodity assistance (10th yen loan II)	3,350	*
79-12-24	Commodity assistance (9th yen loan V)	11,730	
79-12-24	Commodity assistance (11th yen loan I)	2,500	
	(1st yen loan) (Old four projects)		
70-5-6	Industrialization four projects, first period 1	3,600	*
72-9-21	Industrialization four projects, first period 2	3,600	*
73-5-28	Industrialization four projects, first period 3	3,600	*
	(2d Yen Loan)		
71-10-13	Offshore test drilling for oil in Gulf of Martaban 1	3,600	*
	(4th Yen Loan) (New four projects)		
73-6-29	Natural gas turbine power plant	2,821	*
73-11-6	Ceramic ware manufacturing plant	744	*
	Bagas pulp and paper plant		Δ
	Cement plant		Δ

[Table continued]

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[Continuation of Table 4 ② B]

Date of Agreement	Aid	Amount	Note
	(5th Yen Loan)		
73-4-23	Offshore test drilling for oil in Gulf of Martaban	3,080	*
	(6th Yen Loan)		
73-9-18	Syriam Oil Refinery	(7,000)	Δ
	(8th Yen Loan)		
77-3-18	Man oil refinery	29,950	
	(9th Yen Loan III)		
77-7-15	Four projects for industrialization, second period	19,540	
	(Special Yen Loan)		
79-6-8	Increasing transportation capacity of rivers	2,750	
	(11th Yen Loan II)		
79-12-24	Chongqing Cement Plant expansion	6,160	
"	Communications project	2,220	
"	Rice mill	4,350	

Key: * Completed Type -- 1 Plant assistance
 Δ Canceled 2 Commodity assistance

Notes: ② - general untying
 o - LDC untying
 no symbol - tied (based on exchange of official documents)

Fund (Ki): Overseas Economic Cooperation Fund
 (Bu): plant assistance; (sho) commodity assistance
 Source: MITI, ibid., pp 420-423

4. Conclusion

As I have explained here, the Burmese Government has turned its policies toward the active use of foreign aid in order to break out of a long period of economic stagnation. Since that time, a rather large amount of aid has flowed in, and this is having a great impact on the Burmese economy. It goes without saying, however, that borrowings that correspond to Burma's economic strength are desirable when bringing in foreign capital. One guideline for controlling a country's borrowing is what is known as the debt service ratio (DSR). The DSR is the rate found by dividing the debt repayment amount (principal plus interest) for each year by the amount of exports. Burma's DSR is rising dramatically. This is a serious problem, because it has already passed the danger line of 20 percent. Furthermore, much of the borrowing on an ODA basis comes under the 10-year grace period for repayment. This is expected to have a serious effect in the late 1980's, when the repayment amount will increase enormously.

Therefore, the issue forced upon the Burmese economy for the immediate future is how to expand exports. Besides the immediate objective of increasing Burma's debt repayment ability, this is also necessary as an engine for growth, to compensate for the limited domestic market. Foreign aid should also be provided from the standpoint of promoting exports. For this purpose, it is necessary to reform the monoculture type export structure and diversify export products. In order to do this, priority should be given to the use of aid funds for development of primary products which have not been sufficiently developed (especially agricultural products other than rice, forest products, marine products, and mineral products like petroleum and natural gas).

In addition, it is necessary to develop the labor-intensive industries into export industries. Burma has an abundant supply of a broad range of cheap labor. Positive utilization of this labor strength is of great social and economic significance. Since domestic investment by foreign countries is now prohibited, it would seem that aid funds should be actively used for the growth of these industries.

[Oct 81 pp 54-58]

[Article by Kazumi Yamamoto, assistant project manager of the economic development analysis project team, Institute of Asian Economic Affairs, on aid to the Philippines]

[Text] At the Stage of Determining a Method of Evaluation

1. The Domestic Economy and Transitions in Foreign Aid

(1) Domestic Economy

Since independence (1946) the Philippine economy has continued to rely heavily on agriculture. Philippine agriculture is roughly divided between food crops such as rice and corn and export crops such as sugar and coconuts. At present, agriculture makes up 44.3 percent of the GDP and employs 60 percent of the working population.

For this reason, the Philippines Government has looked to industrialization as the path to postwar economic independence and progress, as have other developing countries. The beginning of industrialization in the Philippines was rather early among Asian countries. By the early 1950's, industrialization for import substitution had begun. Restrictions on imports and foreign currency were put into effect in 1949 to cope with the seriously growing deficit in international balance of payments. This resulted in encouraging domestic production in the manufacturing industries.

The import substitution industrialization policy was quite successful until 1960. In particular, from 1949 to 1956, the growth of manufacturing industries was a phenomenal 15.8 percent. However, going into the 1960's, an impasse was reached and a number of problems appeared. There was a tendency toward tightening of the local market and an increase in capital-intensive goods. Because of plants being located close to urban areas, not enough employment opportunities were created. And there was difficulty in obtaining foreign capital because of failure to develop export industries.

In the 1970's, the government reviewed this situation and changed its industrial policy from import substitution to an export orientation. It also began to plan for development of farming villages and rural areas with an emphasis on agriculture, which had previously been ignored because of the effort to industrialize. In addition, President Marcos instituted martial law in 1972 (suspended in January 1980) and promoted further economic development through a policy of introducing foreign capital and loans.

In the midst of these developments, self-sufficiency in rice production was achieved in 1977 through movements for increased rice production such as Masagana 99 which was started in 1973. Some rice was even shifted to export category. Also, by developing industries that were candidates for export business, the export of industrial products grew until nontraditional manufactured products accounted for 36 percent of the total exports in 1980. During the 1960's and 1970's the average growth of the GDP was fairly good, 5.1 percent, and 6.3 percent respectively.

However, strains in the economic structure began to appear. First, there was a chronic deficit in trade payments because of the continuous increase in imports of the intermediate and raw materials necessary for industrialization. Deficits in the international balance of payments had to be compensated with a long- and short-term influx of capital. More recently, this trade deficit was aggravated further by the oil crises of 1973 and 1979. The proportion of crude oil in total imports grew from 12.7 percent in 1973 to 20.7 percent the following year, and it then moved to a level of 22 or 23 percent. In 1980, following the second oil crisis, it jumped to 28.2 percent.

Also, foreign obligations have increased since 1972 and are putting a heavy strain on the Philippines economy. Until 1972, when martial law was put into effect, the amount of foreign obligation was \$2.2 billion; 3 years later it was \$4 billion; by 1978, it had almost doubled, reaching \$7.78 billion; in 1980, it broke the \$10 billion mark, reaching a record \$12.27 billion. This is equivalent to 34.6 percent of the GNP and the debt service ratio moved close to the legal limit of 20 percent.

In 1980, the Philippine economy had a growth rate of only 4.8 percent, the worst record in recent years. The inflation rate was 17.6 percent, staying in the double digit range for a second consecutive year. The Philippines was afflicted with the general economic stagnation common to other nonoil-producing countries. With chronic deficits in trade payments and the international balance of payments, growing foreign debt, and soaring inflation, the Philippines has many problems. And the future economic outlook does not leave room for optimism.

(2) Foreign Aid

Postwar aid to the Philippines began with direct grants from the United States. For 5 years after the war, from 1946 to 1950, it gave a total of \$800 million in direct grants as postwar recovery funds. Most of the aid in the 1950's also came from the United States. The emphasis shifted from postwar recovery aid to aid for long-term and fundamental development of the Philippine economy. In 1952, the Quirino-Foster pact was made between the United States and the Philippines, and in 1954 the Laurel-Langley pact was signed. In 1956, a reparations agreement was reached between the Philippines and Japan.

In the 1960's, there was uncompensated assistance from such countries as West Germany and compensated assistance from the World Bank. Then in the late 1960's, compensated assistance began to come from the Asian Development Bank. Because of this, the relative importance of the United States decreased. On the other hand, the country which was receiving the aid, the Philippines, attempted to change its policy from total support of the United States to more diverse relations of friendship and economic cooperation.

In the 1970's, the number of aid-giving countries and organizations expanded and the forms of aid were also diversified. Especially after the Consultative Group for the Philippines was formed under the sponsorship of the World Bank in 1971, the amount of foreign aid grew rapidly. From 1971 to 1974, the promised amount of development aid surpassed that for the previous 20 years. There was also a great change in the content of aid after 1970. The proportion of direct grants declined greatly, from a previous level of 60 percent to about 20 percent in recent years. One important change is that Japan is now the largest source of aid to the Philippines, although its contribution was very small before 1971. The major countries giving aid to the Philippines at present are Japan, the United States, Australia and West Germany. Among international organizations, the World Bank and the Asian Development Bank supply the greatest proportion of aid (see Table 1).

Beginning in 1979, the Philippines launched 11 large industrial projects, and it is now working to develop heavy and chemical industries. In July 1980, it announced a 5-year plan for energy which was a revision of a previous 10-year plan, and it is actively working on energy development. The former projects will require a total expenditure of \$6 billion. The latter is expected to require \$9.5 billion. Half of both of these sums will have to come out of foreign aid, so it will continue to be impossible to break away from dependence on foreign aid. The ODA promised to the Philippines by the Consultative Group for the Philippines for 1981 was \$1.2 billion.

2. Aid From Major Countries and International Organizations

(1) Major Countries

Total American aid to the Philippines between 1946 and 1979 was \$1.1 billion. Of that amount, \$720 million took the form of grants and loans, and the rest was food. Looking back on past aid, we find that aid was first given for the rebuilding of the country and was concentrated on agriculture, hygiene, and construction. In the late 1950's, the emphasis in aid shifted to investment for industrial development and improvements in government management techniques. In the 1960's, foreign aid was reexamined, and through enactment of the Foreign Aid Law, the emphasis shifted from industrial development to agricultural production, regional development, and social problems. In the 1960's, there was an emphasis on construction of infrastructure and this was carried over to the 1970's. In 1973, there was a second policy change. The improvement of the standard of living of poor rural villagers took first priority, and this policy has also been carried down to the present. The policy for the next 5 years (1981-1985) has been clearly formulated to provide aid to landless peasants.

Australian aid to the Philippines goes back to the Colombo plan of 1952. The total amount from 1952 to June 1979 was 40.9 million Australian dollars. This aid was chiefly divided into capital project aid, technological assistance, and food assistance. All of it was given in the form of grants. A characteristic of the capital assistance is that it was limited to particular regions. The aid policy of the Australian Government, limited to capital aid to the Philippines, has been to specify a region, and when the project (comprehensive development) was completed there, to move to another region. The projects underway at present are the Zamboanga Del Salle [phonetic] development project (begun in 1974) and the Northern Samar comprehensive regional development project (begun in 1979). Since all Australian aid to the Philippines is in the form of direct grants, the aid process is working smoothly without any special problems.

West German aid to the Philippines has become substantial only in recent years. Some reasons for this are that American influence was traditionally strong there, and then subsequently the Japanese moved in. There are three kinds of West German aid: regular aid programs, irregular aid programs, and technological aid. The irregular aid was started in 1962 and the regular aid began in 1969. The total capital aid from 1962 to 1979 was DM 751.3 million. The terms for this capital assistance have generally been an interest rate of 2 percent, a 10-year grace period, and a 30-year repayment period. Most of the aid has been concentrated in harbor facilities and electrical power. The West German Government is very concerned about West German public opinion with respect to aid to the Philippines. This is because public opinion in West Germany is very critical of the Marcos government.

(2) International Organizations

Up to 1980 there were 73 loan proposals for loans from the World Bank to the Philippines, and the total amount of loans was \$2,512,100,000. Seventy of

these loans, or \$2,389,900,000, came from the World Bank itself and 3 of them, or \$122.2 million, were loaned by the IDA (International Development Association). The terms of World Bank loans have become more stringent in recent years. In 1980, the loan terms included a repayment period of 15 years (5-year grace period) and an interest rate of 8.25 percent. The amount of aid in 1980 was about \$400 million or 40 percent of the total aid given to the Philippines. In 1980, the World Bank gave a structural improvement loan of \$200 million to the Philippines for the first time. The major objective of this was an attempt by the World Bank to make up for the extreme deterioration in the international balance of payments accompanying the domestic economic revolution. There are three specific areas for which loans were given--a coal conversion project for energy development and the fuels used in the cement industry, a restoration and modernization plan for the fiber industry, and expansion of exports through increased construction of export-processing regions and expansion of preferential loans for exports.

Loans from the World Bank to the Philippines, perhaps partly because the headquarters are in Manila, have increased rapidly in the last few years. At the end of 1980, there were 46 loans to the Philippines from the general fund and 7 from the development fund. The loan amount included \$1,067,050,000 from the general fund and \$64.3 million from the development fund for a total of \$1,131,350,000. There were 34 instances of technological aid totaling \$5.91 million. In terms of the total loans to a particular country, 1980 was the first year that the Philippines moved into first place, ahead of Korea, which got \$1,172,030,000 [sic]. The average terms of the loans from the general fund given in 1980 were a repayment period of 21 years (3.75 year grace period) and an interest rate of 8.8 percent. For the loans from the development fund, the average conditions were much more lenient, a repayment period of 40 years (10-year grace period) and an interest rate of 1 percent. Breaking down the loan proposals by category, we find that the largest amount, 19.1 percent, went for electric power. This was followed by 18.7 percent for industry, 15.0 percent for water supply, 12.7 percent for roads, and 11.3 percent for irrigation. Thus, these categories made up 76.8 percent of the total.

3. Japanese Aid

(1) General Conditions

Japanese economic assistance to the Philippines goes back to the reparations agreement reached in 1956. Japan paid reparations over a period of 20 years up to 1976--\$25 million a year for the first 10 years and \$35 million a year for the second 10 years, for a total of \$555 [sic] million. This was the largest amount of reparations paid by Japan to any country. It was almost twice the amount of reparations paid to Indonesia, Burma or Thailand. The reparations breakdown by purpose was as follows: 65.4 billion yen for public utilities, 49.57 billion yen for transportation and communications, 30.07 billion yen for manufacturing industries, 12.85 billion yen for agriculture and forestry, 9.32 billion yen for medical equipment, and 22.99 billion yen for other fields. Thus, there was a broad range of items procured with the reparations, and they played an important role in Philippine economic

development. For example, 29.2 percent of the foreign currency financial sources (\$498.98 million) for government infrastructure investment in the 4-year period from 1972 to 1975 came from reparations.

The aid up to 1960 mainly consisted of reparations and technological cooperation. However, in the 1970's there was great diversification of aid, including compensated financial assistance, such as yen loans and deferred payment exports of Japanese rice, and uncompensated aid, such as cultural grants and food assistance (see Table 2). Technological cooperation was still included. The first compensated form of aid was the joint loan from the Export-Import Bank of Japan and 13 city banks agreed upon in 1969 for the Japan-Philippines Friendship Highway. Following that, Japanese yen loans began in 1971, and nine yen loans were made between then and 1981.

Japanese aid to the Philippines on a bilateral basis became the largest of any country, exceeding that of the United States, in 1972. The record for 1979 (based on expenditures) was \$89 million, or 52.3 percent of the aid received from single countries (see Table 1). The 1979 aid included \$57.25 million in government loans, \$31.91 million in grants, and \$17.65 million in technological cooperation. The uses of the eighth yen loan are shown in Table 3. A loan agreement for the ninth yen loan, 42 billion yen (\$187.11 million), was concluded on 9 June 1981. The loan will be made under special terms, a repayment period of 30 years (a grace period of 10 years) and an interest rate of 3 percent. It will be used for the following seven projects: (1) the Negros southern geothermal power generation project (\$48.1 million), (2) the Northern Luzon power generation network project (\$33.9 million), (3) the Isabela Bay special wharf project (\$33.7 million), (4) the second Japan-Philippines Friendship Highway project (\$28.1 million), (5) the first Ilocos Norte Province irrigation project (\$22.3 million), (6) a power transmission line construction project (\$20.5 million), and (7) a consulting service for railroad rolling stock and facilities (\$510,000).

(2) The Status and Evaluation of Assistance

As we have seen, Japanese aid to the Philippines has been the greatest of any single country. Because of this, Philippine expectations of Japan are great. However, whether or not Japanese aid will be used effectively is a separate question. The amount of USAID aid is less than that of Japan, but USAID has a regional office in Naga in addition to the Manila office and a permanent staff there. It has 159 staff members, including Filipinos, in its Philippine offices, and they are engaged in administering detailed aspects of aid activities. In comparison, there are only two people in the Manila office of the Japanese Overseas Economic Cooperation Fund (OECF), and they are overwhelmed with the daily workload. If there is to be truly effective aid to a particular country, it will be necessary for a permanent staff to be continuously committed to a project from beginning to end (even after completion of the actual work) of the project. From this standpoint, we can say that the size of the Japanese staff is far too small, and a system for effective aid administration has not yet been established.

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The Philippine Government has requested several things concerning aid. The completion of projects is constantly delayed because of a shortage of domestic currency funds, so it is asking the aid-giving countries to take a share of the domestic currency burden. It wants a reduction in the excessive time required from feasibility studies to completion of projects. It also wants to eliminate the restrictions on orders for equipment and materials connected with aid. In response, Japanese aid at present has been made to cover 30 percent of the local currency burden, and procurement is now generally untied, unlike the situation before 1987. So improvements are being made which are gradually meeting the desires of the local government.

The period necessary for project evaluation varies with the project, but usually a period of 5 to 10 years is required. Japanese yen loans to the Philippines have a short history, having begun in 1971, and they have just reached the stage where evaluation is possible. Unquestionably, this evaluation is essential to making Japanese aid effective in the future. Preparations are now being made at the Institute of Asian Economic Affairs for evaluation of Japanese aid. The evaluation work is scheduled to begin next year, and good results are hoped for.

Table 1. Aid From Foreign Countries to the Philippines * 1970-1979
(net disbursements) (in millions of dollars)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Bilateral										
Japan	19.2	29.6	103.5	141.6	73.3	70.3	75.5	30.6	66.5	89.2
United States	19.0	30.0	47.0	64.0	46.0	63.0	60.0	86.0	67.0	54.0
West Germany	2.1	1.8	1.9	1.0	0.2	9.1	8.2	7.5	10.3	11.0
Australia	0.2	0.2	1.7	1.2	5.5	8.1	5.5	7.9	7.2	7.6
Other countries	0.8	2.1	2.3	5.2	7.9	9.6	11.8	11.9	13.7	8.6
Subtotal	41.3	63.7	156.4	213.7	132.9	160.1	161.0	143.9	164.7	170.4
Multilateral										
IBRD/IDA	10.5	16.3	9.9	27.4	38.5	86.9	90.2	92.7	143.5	187.9
ADB	△2.0	2.4	2.4	0.6	26.5	42.3	44.7	28.3	△6.7	69.7
UNDP	2.6	3.0	4.5	4.0	4.1	4.3	4.1	3.6	5.0	5.7
IMF	—	—	—	—	—	—	—	19.4	59.7	60.6
Other organizations	0.8	5.5	3.9	22.6	25.7	6.7	4.8	6.0	10.3	11.1
Subtotal	13.6	27.2	20.7	54.5	94.8	140.2	143.8	150.0	212.8	338.0
Total	54.9	90.9	177.1	268.1	227.7	300.3	304.8	293.9	377.5	508.4

* Bilateral aid includes only ODA. Multilateral aid includes other forms of aid in addition to ODA.

Source: Compiled from OECD, "Geographical Distribution of Financial Flows to Developing Countries," 1978 and 1980 editions.

Table 2. Japanese Achievements in Uncompensated Financial Assistance
(based on exchange of official documents)

Year	Amount in millions of yen	Projects	Notes
1956-1976	190,203	Reparations (water supply facilities, prefabricated components for schools, railroad cars, ferry boats, steel plants, lumber mills, paper mills, funds, equipment and materials for flood control, cobalt treatment equipment, etc.)	Grants based on reparations agreement (effective 23 July 1956)
1972	80	Papanga River flood warning facilities	
1976	550	Lecture halls and library for University of the Philippines	
1977	700	Rice polishing facilities on Leyte and Mindoro (100 million yen), National Hydraulic Center (600 million yen).	
1978	1,550	Pantabangan Forest Conservation Study Center (1.05 billion yen), nutrition improvement project (250 million yen), bridge construction project (250 million yen).	
1979	2,450	Tropical medicine research center (1.75 billion yen), fishery research training ship (700 million yen)	Equipment and materials for anthropological research at the Higher Studies Center (7 million yen), gymnastics equipment for the Philippine Normal College (13 million yen), audiovisual educational equipment and materials for the University of the Philippines (18 million yen), equipment and materials for national standard test evaluation (50 million yen)
1980	2,766	General Research Training Center of the Philippine Institute of Technology (1.85 million yen), terminal irrigation facilities construction (916 million yen)	
1977-1979	(8,096) 88	Cultural grants (four cases)	
1971-1977	1,573	KR food assistance (5 cases)	
1977-1980	7,100	Increased food production assistance (2 cases)	Japanese rice, Thai rice
Total	207,060		Fertilizer, agrichemicals, agricultural equipment

Source:

Table 3. Direct Loans Provided by Japan (based on official documents exchanged)

Year	Date of Agreement	Amount (in units of 100 million yen)	Repayment period (years) (in parentheses)	Annual interest (percent)	Administrative organ	Use
1968	69-2-21	108	19 (5)	5.125	Ex-Im Bank, city banks	Japan-Philippines Friendship Highway
1971	71-11-26	234	20 (7)	3.5	OECE	Commodity loans (14.4 billion yen), Cagayan Valley electrification project (5.2 billion yen), etc.
1972	72-10-17	123.2	20 (7)	3.5	"	Commodity loans
1973	73-11-20	106	25 (7)	3.25	"	"
"	" 12-27	47.29	25 (7)	3.25	"	National railway commuting facilities (1.9 billion yen), road equipment management and maintenance depot construction (1.8 billion yen), etc.
1974	74-6-27	72.52	25 (7)	3.25	"	Underground water for irrigation project (2.9 billion yen), dredging project for river improvement (3.2 billion yen)
"	75-2-21	75	25 (7)	3.5	"	Commodity loan
1975	" 7-4	109.88	25 (7)	3.25	"	Pasig River flood control (5.1 billion yen), Bataan export-processing area construction (5.9 billion yen)
"	" 9-30	38	25 (7)	3.25	"	Japan-Philippines Friendship Highway and related roads improvement project
1976	76-9-2	50	25 (7)	3.25	"	Commodity loan
"	77-3-31	{ 111.2 71.8	25 (7) 25 (7)	4.25 3.25	"	Subic shipbuilding and repair yard project
1977	77-11-17	50	25 (7)	3.25	Ex-Im Bank, city banks	Cagayan general agricultural development project (6.2 billion yen), construction of overhead crossing for southern Manila bypass road (300 million yen), Aburg hydroelectric power plant (E/S) (700 million yen)

[Table continued]

[Continuation of Table 3]

Year	Date of Agreement	Amount (in units of 100 million yen)	Repayment period (years) (grace period in parentheses)	Annual interest (percent)	Administrative organ	Use
1977	77-12-21	225	25 (7)	3.25	OEC	Cagayan Valley rural electrification project (10.4 billion yen), harbor maintenance dredging project (4.0 billion yen), national railroad commuting and freight improvement project (3.0 billion yen), Japan-Philippines Friendship Ferry project (3.0 billion yen), flood warning system project (1.8 billion yen), Japan-Philippines Friendship Highway construction project (300 million yen)
1978	78-11-7	325	30 (10)	3.25	"	Regional road maintenance project (4.6 billion yen), air travel safety facilities expansion project (5.3 billion yen), high-yield seeds production and distribution project (1.4 billion yen), fishing port construction project (8.3 billion yen), river improvement dredging project (2.4 billion yen), harbor maintenance dredging project (4.4 billion yen), project for maintenance of roads north of Manila (3.0 billion yen), regional communications network construction project (100 million yen), road construction project (300 million yen), western Leyte road improvement project (200 million yen), and commodity loans (2.5 billion yen)
"	78-12-26	70	30 (10)	3.25	"	Power generation ship project
1980	80-6-20	360	30 (10)	3.00	"	Tongonan [phonetic] geothermal power plant construction (18.8 billion yen), export industry modernization (5.4 billion yen), regional water supply system construction (2d period, 1.86 billion yen), Ilocos Norte region road improvement (730 million yen), metropolitan Manila city traffic improvement (5.41 billion yen), harbor cargo facilities expansion (1.54 billion yen), national distribution of information and education (1.1 billion yen), etc.
Total		2,176.89				

Source: Same as Table 2.

During the visit of Prime Minister Suzuki to the ASEAN countries, local economic journals carried special articles on Japanese economic aid, but there were no commentaries that went as far as project evaluation. The past achievements of Japanese economic aid were presented, but this included only the Cagayan Valley rural development, electrification projects, and technological cooperation. There is not yet much general interest in Japanese aid projects. The true effectiveness of Japanese aid will likely come into question when there is further growth in public interest.

[Dec 81 pp 41-45]

[Article by Takao Taniura, researcher for the Institute for Asian Economic Affairs, on aid to ROK]

[Text] Trade Wanted More than ODA

1. The Korean Economy and Foreign Aid

(1) American Military Support

The Republic of Korea became independent in 1948, and the Korean war broke out (in 1950) before it was able to absorb the economic and social disruption that accompanied the split between north and south. The war resulted in thorough destruction of the land, and many industrial facilities lost their capacity to produce.

Following the signing of the truce agreement in 1953, under the Syngman Rhee government, the ROK set out to rebuild its economy while relying on economic aid from America and the United Nations. The main financial source for the United Nations was the United States, so the aid to the ROK was in reality borne entirely by the United States. However, the American aid to the ROK during this period had the strong character of military support to the ROK as the front line against communism, and it was not necessarily aimed at economic development. In other words, in addition to furnishing direct military expenses for arms, etc., America also gave economic aid to the Korean Government to help assist in the burden of wages for the 500,000-600,000 members of the Korean military forces. Because of this, the majority of American economic aid took the form of donations of consumer commodities or raw materials which could easily be turned into cash (surplus agricultural products as defined by American Public Law No 480). The cash received for them was applied to military expenditures, which made up 30-40 percent of ROK Government expenditures. This American economic aid to support the Korean military, as shown in Table 1, amounted to an annual average of \$250 million for the 10 years from 1954 to 1963. This decreased to an annual average of \$100 million in the late 1960's, and fell to almost nothing in the 1970's.

Although the American aid to the Pak Chong-hui government was not directly intended for the economic development of Korea, it provided an opportunity to develop industries which processed the commodities given as aid (fiber and food industries such as the cotton industry, flour milling, and sugar refining).

Table 1. American Aid to South Korea Under PL 480 and Through AID

<u>Period</u>	<u>Total amount in thousands of dollars</u>	<u>Annual average in thousands of dollars</u>
1954-1963	2,537,100	253,710
1961-1971	828,024	103,503
1972-1980	12,814	1,424

Source: National Economists Association, "ROK Economic Annual," 1981 edition

Thus it allowed for a certain accumulation of industrial capital and the appearance of a class of business managers. And this undeniably formed the foundations for the industrialization of Korea from the 1960's on.

(2) Industrialization and the Introduction of Foreign Capital Under the Pak Government

The Pak Chong-hui government came into power through a military coup d'etat in 1961. It instituted several 5-year plans beginning in 1962, and forcefully promoted industrialization under government leadership. In order to gain the funds for industrialization, it worked actively to bring in foreign capital. This coincided with the foreign economic aid policies of President Kennedy, who at the time was attempting to shift the economic aid to Korea from direct aid for the purpose of military support to development assistance credits.

In this way, the Pak government changed the foreign policy of the Rhee government, which had been very closed to foreign countries with the exception of its dependence on the United States. Particular importance was placed on Japan, which was close geographically and growing economically at a rapid rate. In 1965, the Korean Government overcame the opposition of its people, who had strong anti-Japanese feelings, and achieved normalization of Korean-Japanese relations. From then on, there was a large inflow of public and private capital from Japan. Industrialization was pushed ahead quickly. The United States and the countries of Europe took notice of the growth potential of the Korean economy, and the capital inflow from these sources steadily increased. As shown in Table 2, the annual average of foreign capital (loans for more than 3 years and direct foreign investment) during the first 5-year period (1962-1966) was only on the average of \$60 million per year. However, this grew rapidly to \$450 million during the Second Five-Year Plan (1967-1971), \$1.2 billion during the Third Five-Year Plan (1972-1976), and \$2.7 billion in the Fourth Five-Year Plan (1977-1980).

Looking at the content of capital inflow to Korea from 1962 to 1980, we can say that public loans were initially the main component, but around the time of normalization of Japanese-Korean relations in 1965 private loans became the main item, and after 1970 direct investment by foreigners became important. The sum total of direct foreigner investment as of June 1981 was

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Table 2. Foreign Capital Inflow

<u>Period</u>	<u>Public loans in thousands of dollars</u>	<u>Private loans in thousands of dollars</u>	<u>Investment by foreigners in thousands of dollars</u>
1959-61	4,386 (1,462)	--	--
First Five-Year Plan (1962-66)	115,595 (23,119)	175,600 (35,120)	16,675 (3,335)
Second Five-Year Plan (1967-71)	810,808 (162,162)	1,354,728 (270,946)	96,354 (19,271)
Third Five-Year Plan (1972-76)	2,388,867 (477,773)	3,042,916 (608,583)	557,040 (111,408)
Fourth Five-Year Plan (1977-80)	4,067,100 (1,016,800)	6,189,900 (1,547,500)	426,600 (106,700)

Note: Loan figures are given for loans of 3 years or more, based on figures at arrival. Total amount is shown. The annual average is given in parentheses.

Source: Previously cited, "ROK Economic Annual"

\$1.165 billion. Most of this was joint venture investment in local industry. In many cases, private loans were introduced in parallel to make up for shortages of operating funds.

Looking at this, we can conclude that the industrialization of Korea under the Pak government was achieved through economic cooperation on a private basis. In any event, today's Korea has emerged as a semideveloped industrial country in Asia and belongs among the ranks of advanced countries more than among recipients of official development aid. It has even attempted to provide economic assistance to less developed countries. The ROK's overseas investment balance (credits and direct investment), was only \$12.6 million at the end of the 1960's. By the end of the 1970's, it was over \$500 million.

2. Economic Aid to Korea From Other Countries

(1) General Features

The provision of ODA to Korea by various foreign countries in the 1970's is shown in Table 3. In 1979, the total ODA to Korea (net receipts) was only \$134 million, a 40-percent reduction from the \$324 million of 1971. Multilateral aid gradually increased during the 1970's, but in 1979 it only commanded 10 percent of the total. At the beginning of the 1970's, 90 percent of the bilateral aid came from just two countries, Japan and the United States. By the end of the decade, this percentage had dropped to 60 percent,

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but it still commanded a strong share of the total. In 1979, West Germany gave 15 percent of the total, but the aid from other Western European countries was close to nil.

Table 3. Aid to the ROK From Foreign Nations (in millions of dollars)

		1971	1972	1973	1974	1975	1976	1977	1978	1979
Totals	Loans	240.3	282.4	221.7	192.4	184.4	193.9	197.1	121.8	94.3
	Grants	84.3	82.8	60.6	59.5	65.2	24.1	41.6	42.5	39.5
	Totals	324.5	365.2	282.3	252.5	249.5	218.0	238.6	164.3	133.8
Japan	Loans	101.2	66.1	127.9	129.2	50.2	18.5	75.5	54.6	45.0
	Grants	23.1	46.6	28.7	38.6	37.3	5.7	8.8	11.5	9.1
	Totals	124.3	112.7	156.6	167.8	87.5	24.2	84.3	66.1	54.1
America	Loans	124.0	211.0	80.0	31.0	90.0	126.0	57.0	47.0	23.0
	Grants	51.0	19.0	11.0	2.0	-2.0	-2.0	1.0	4.0	1.0
	Totals	175.0	230.0	91.0	33.0	88.0	124.0	58.0	51.0	24.0
West Germany	Loans	1.3	0.5	6.9	12.4	29.0	25.0	15.2	1.4	3.0
	Grants	2.8	4.6	4.8	4.6	5.6	5.0	9.3	10.4	15.1
	Totals	4.1	5.1	11.7	17.0	34.6	30.0	24.5	11.8	18.1
Multilateral	Loans	13.1	3.7	6.1	19.9	15.1	24.7	29.0	6.3	3.4
	Grants	6.2	10.3	13.3	11.8	21.3	12.2	17.2	9.0	10.3
	Totals	19.3	14.0	19.4	31.7	36.4	36.9	46.2	15.3	13.7

Note: based on net receipts

Source: OECD, "Geographical Distribution of Financial Flows to Developing Countries," 1978 and 1980 editions.

Most of the aid was in the form of credits, but while both direct aid and credits diminished, the ratio between credits and direct aid stayed at about 75:25 throughout the 1970's. In any case, the position of ODA is becoming less important each year in relation to the total amount of funds required for Korean economic development, and today it has lost its significance.

(2) Characteristics of Various Countries' Economic Aid to Korea

American ODA to Korea was \$175 million in 1971, about half of the total. In 1979, it had dropped to only \$24 million and its percentage of the total had dropped to 25 percent. In terms of the types of aid, America commanded 29 percent of the ODA to Korea in 1971 with direct grants of \$51 million, but in 1979 it had fallen to a mere 4 percent with grants of \$1 million. The majority of the American Government credits to Korea were long-term deferred payment exports of surplus agricultural products under U.S. Public Law No 480. This had the feature of increasing or decreasing depending on Korean food production. In recent years, this aid has also decreased greatly because Korea has begun importing foodstuffs in ordinary form.

The Korean National Academy of Sciences was built as a kind of memorial to direct aid in 1970, but there were no other such visible results. However, this became a means of encouraging a reversal of Korea's brain drain, so it had very high exhibition value as a symbol of technological progress.

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West German ODA to Korea was small in absolute terms, but the percentage of direct aid was very high, and this was a big difference compared with Japan and the United States. Of the \$157 million in total West German ODA to Korea in the period from 1971-1979, \$62.2 million or 40 percent was direct grants. This was much larger than Japan's 24 percent and America's 10 percent.

Looking at the content of West German ODA to Korea, the main feature was technology-related assistance such as educational facilities (technical high schools) and the acceptance of students for technical training.

Economic aid on a multilateral basis from the World Bank or the Asian Development Bank has gradually increased. Also, an inflow of government credits from the OPEC countries began to increase in the latter part of the 1970's. These funds were mainly used to form indirect capital for social development. This included construction of dams, highways, and communication facilities.

3. Japanese Economic Aid to Korea

(1) General Features of Economic Aid

Japanese economic aid to Korea began with the normalization of relations between Japan and Korea which took place in 1965. This consisted of \$300 million in grants and \$200 million in government credits agreed upon in the claims and economic cooperation pact. Because of the peculiarities of the negotiation process, this was referred to as "quasi-reparations" by the Japanese and "claim funds" by the Koreans and was handled separately from general ODA. Specifically, the ROK saw this as compensation for legitimate claims and did not want to include it under the category of economic aid. And in reality, it differed from general ODA which is applied to successive separate projects. It was arranged so that the ROK Government would set up projects autonomously within prescribed limits (\$300 million in grants, \$200 million in credits), and would request the necessary materials and personnel from Japan. These "quasi-reparations" were provided in installments over a 10-year period from 1966 to 1975.

Beginning in 1971, general direct aid and credits went into effect that were separate from these "quasi reparations." For these, negotiations were carried out for each project, and loan agreements were concluded. This became the regular style of ODA to Korea from then on.

Provision of capital (credit) on a private basis also began with the normalization of relations in 1965. Most of this was in the form of deferred payment exports using the Export-Import Bank of Japan. Also, serious direct investment by Japanese companies began in the early 1970's, and it came to be a majority of the direct investment by foreigners in the ROK.

Table 4 shows overall figures for these categories of Japanese economic assistance to the ROK during each 5-year plan. These are statistics from ROK sources for loans made for 3 or more years and direct foreigner investment.

Table 4. Capital Inflow From Japan

<u>Period</u>	<u>Public loans</u>	<u>Private loans</u>	<u>Direct investment</u>
	(in millions of dollars)		
1st program	13.8	60.6	0.7
2d program	177.2	426.2	38.9
3d program	406.3	435.6	405.3
4th program	401.9	1,625.5	182.6

Source: Same as in Table 2.

The "quasi-reparations" mentioned above are excluded. Generally speaking, the initial "quasi-reparations" built the foundations of economic exchange between Japan and the ROK. Afterward, the main assistance was the deferred payment exports utilizing funds from the Export-Import Bank of Japan. In the first half of the 1970's, direct investment (company operations in the ROK) came to be on a par with other forms of assistance. In the latter half of the 1970's, the ROK seriously undertook the establishment of heavy and chemical industries, and deferred payment exports again became the main form of aid. Private economic assistance became important along with the growth in the Korean economy. This was confirmed on a political level by a joint statement of "the central role of private economic assistance" at the Japan-ROK periodic ministerial conference in 1978. As shown in Table 4, there was an annual average of \$100 million in yen credits during the 1970's. This dropped relative to other forms of economic assistance, and when we consider the decline in the dollar during that period, we see that it also shrank in absolute terms.

(2) Japanese ODA to the ROK

On the basis of exchanged documents, the Japanese ODA to the ROK between 1965 and 1980, including "quasi-reparations," reached a total of 541.18 billion yen. A breakdown of this aid is shown in Table 5.

Table 5. Government-Based Financial Support From Japan to the ROK

<u>Period</u>	<u>Direct grants</u> <u>in millions</u> <u>of yen</u>	<u>Loans,</u> <u>in millions</u> <u>of yen</u>	<u>Total,</u> <u>in millions</u> <u>of yen</u>
1st program	102,093*	67,728*	169,821*
2d program	526	159,184	159,710
3d program	2,957	116,490	119,447
4th program	1,132	91,070	92,202
Total	106,708	443,472	541,180

* "quasi-reparations"

Source: MITI, "Present Status and Problems of Economic Cooperation," 1981

Some notable projects from the compensated and uncompensated "quasi-reparations" were the Soyang River Dam construction project (4.6 percent of the total) and the steel and iron industrial complex at Pohang (22.4 percent).

The Soyang Dam construction project was the first major development project in the great river basins of the ROK after liberation, and it became a model for similar projects carried out afterward. It made the ROK Government aware of the possibilities and importance of development of the four great rivers (the Han, the Nakdong, the Kum, and the Yongsan). And this project became a practical arena for the rapid improvement of the technical level of Korean civil engineering and construction industries, which had been in a period of infancy.

The other project, the Pohang industrial complex, was a plan to build a complete steel-making plant on an international scale. It was a memorial to ROK industrialization under the Pak government. Negotiations for this project were carried out between the ROK Government and the United States and other Western countries which were to provide loans. However, these negotiations ended in disagreement, and the ROK was forced to bring the project under the framework of the "quasi-reparation" funds. There were some who were afraid that it would prove to be too much of a burden to the Korean economy, which at that time was in the early stages of industrialization. However, because of the character of the "quasi-reparations" explained above, this project was carried out in accordance with the wishes of the ROK Government. The Pohang steel complex, built with "quasi-reparations," had an annual production capacity of 2.5 million tons. It was further expanded with privately based economic assistance and now has an annual project of 8.5 million tons. It has attracted attention as an example of a "boomerang effect," whereby its products now compete with those of Japanese steelmakers on the world market.

If we look at ODA given to the ROK after 1971, we find that the uncompensated part, or direct grants, included provision of facilities, equipment, and materials for technical educational institutions up to 1976, and materials and equipment for medical institutions from 1977 on.

The compensated portion was half commodity assistance, including food, and half project assistance. Most of the projects were conventional indirect social capital projects, but beginning in the late 1970's, aid was received for the educational and medical sector. Attention began to move a step ahead of economic development to basic social development. Also, assistance continued to be provided to agriculture, which was a particularly slowly developing sector of the ROK economy; 19.2 percent of the total yen loans were applied to this area. Investment in agriculture is significant for social development as well as economic development, so this did not contradict the general shift in emphasis of Japanese ODA to Korea. Major projects carried out with compensated assistance include the Seoul subway (7.2 percent of yen credit), the Taech'ong and Ch'ungju multipurpose dams (7.1 percent), and various agricultural projects (19.2 percent).

All of these projects have achieved the results anticipated. But since they were all the first such construction projects in the ROK, the experience

gained by ROK civil engineering and construction industries which participated in them brought about technological advances in those industries similar to the effects of the Soyang Dam. In particular, the large-scale introduction of modern construction equipment through ODA led directly to a strengthening of the international competitiveness of the ROK construction industry. This made possible an overseas expansion of the construction industry as well as the autonomous growth of various types of construction businesses within the ROK. Of course, this was not a direct result of the Japanese ODA. It was a totally secondary effect. But it is noteworthy in view of the overseas operations of the Korean construction industry, which has become an important provider of foreign currency.

Conclusion: The Significance of "\$6 Billion of Economic Assistance"

There was dramatic expansion of Korean industries in the 1970's. The present Korean economy is assessed as having sufficient strength to handle the kinds of projects, including the technical problems, which were objects of Japanese ODA. Under the Japanese approach to ODA, statements were made to the effect that funds would be provided for separate projects agreed upon, but in reality, Japan provided the personnel and materials which were needed to carry out the project and could not be supplied by the recipient country. If the application of the aid is limited to traditional fields, there is no longer a need for this type of assistance in the ROK. Therefore, the ODA from all foreign countries to the ROK is actually decreasing rapidly year by year, and statements are being heard similar to the one mentioned which was made at the Japan-ROK periodic ministerial conference. To put it another way, because of the results achieved through ODA to the ROK, it has broken out of the economic development stage in which it was a recipient of ODA. The role played by ODA in the ROK has apparently come to an end.

However, at a meeting of the Japanese and ROK foreign ministers held in August 1981, after a long period without such meetings, the ROK made a request to Japan for \$6 billion in government loans, to the great surprise of the Japanese. Besides the large size of the amount, Japan is concerned about the purpose of the request, support for the ROK defense effort (security economic assistance). The Japanese minister of foreign affairs promptly refused the request. Later, at the Japan-ROK periodic ministerial conference, there was no progress in bringing the views of the two parties closer, and negotiations are still deadlocked.

As stated earlier, the ROK economy has progressed to the point where it does not require ODA from Japan as in the past. So why did the ROK suddenly ask for a huge government loan of \$6 billion.

It is well known that after 1976 the Korean economy had begun to lose its balance because of the overly ambitious promotion of the heavy and chemical industries. It was then hit hard by the second oil crisis and fell into a deep recession in the latter part of 1979. Crop failures due to a cold summer in 1980 added to the difficulty. Effective steps could not be taken because of a loss of central government power after the assassination of

President Pak, and the recession became worse and worse. As a result, the growth rate fell to minus 5 or 6 percent, and it is not difficult to imagine how this hurt the self-confidence of the ROK Government. Looking at the activity of the ROK economy this year, we find that although there may not be further retrogression, there is still a high level of inflation and not much growth in exports. Accumulation of foreign debt seemed to be a part of the motive power of the economy rather than a burden during the period of high growth. However, by economic logic, it begins to exert heavy pressure once the economy stagnates.

Private loans were the main factor in overcoming the ROK's trade deficit in the past. Even now, it seems to be possible to obtain them without serious difficulty. However, a flexible interest system for private loans has become common, and previous advantages (partial elimination of debt by inflation) have relatively diminished. Therefore, the ROK's crisis in international payments can be temporarily postponed through an infusion of private loans, but this cannot be a fundamental solution. At the same time, a large increase in low-interest, long-term government loans cannot be hoped for under conventional ways of thinking. It appears that the ROK has attempted to break out of a hopeless situation with the new concept of "security economic assistance," or in other words, by creating a new "category of aid."

Whatever we may think of "security economic assistance," it is clear that the present \$6 billion problem has its roots in the accumulation of foreign debt which accompanied Korean economic development. The accumulation of foreign debt is a worldwide problem today. And Korea did not escape it even though it was regarded as one of the most outstanding performers among the developing countries.

The ROK is also complaining about the problem of a trade imbalance with Japan. Even without raising the example of Taiwan, which has a trade imbalance with Japan but does not have such a large accumulation of foreign debt, we must say that it is not appropriate to propose government loans as a solution to the problem. It is necessary to point out that there is room for further thought in the ROK's economic policies and development strategies.

Even so, if an extreme trade imbalance is maintained over the long term with resource-poor countries like the ROK and Taiwan, the result is to place a burden on the other party. The idea that real economic cooperation comes through trade rather than aid is especially true for Japan and these semi-developed countries. We can say that Japan has reached the position where it must make a conscious effort.

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ECONOMIC

VICE PRESIDENT OF NTT DISCUSSES INS SYSTEM

Tokyo SHUKAN BIRION in Japanese 12 Mar 82 pp 20-23

[Text] [Question] Lately, INS, Information Network System, has become a topic of conversation. Yasusada Kitahara is the leader of Nippon Telegraph and Telephone Public Corporation's technology team and also an advocate of INS. In the event of INS completion, it is said that a terrific society will come about, but I can't quite clearly visualize this image. Today, I would like to ask what kind of impact INS will have on our society, and what is the technology supporting INS.

[Kitahara] First of all, I want you to understand that Japan is a telephone society. The accumulated delays in 1978 of not getting a phone soon after applying has been completely resolved, and all of Japan can call freely.

There are 40 million telephone subscribers in Japan and 60 million telephones. Japan and the U.S. together account for more than half of the world's telephones.

On the one hand, Alvin Tofler, who wrote "The Third Wave," and Harvard University's Daniel Bell and others are saying: "In the 21st century, information will support national life and information will cause major changes." It is the so-called post-industrial society. As for whether it was correct to interpret this as a de-industrialized society or not, at any rate I have asserted for some time that it is necessary to create an information network system in such a society. That is, create the network most adapted to information.

Speaking a little more concretely, just as Daniel Bell says, in a high level information society, 10 percent of information exchanged is by telephone; 90 percent is by means other than the telephone. I am calling "means other than the telephone" the non-telephone system. The non-telephone system will steadily increase. It can be said that INS is necessary for this new society.

100,000 Yen Automobile Telephone

[Question] The non-telephone system refers to facsimile and data communication, doesn't it?

[Kitahara] Yes. However, it is absolutely necessary to obtain the understanding of the private sector in order to promote INS. It will be hopeless if the people say, "Let the telephone company do as it pleases. If the rates go up, we won't use the telephone."

On this point, I myself have considered how the life of the Japanese would be affected by INS. I will present the results of this research soon, but for example, let's consider the image of "peace of mind" in daily life. It is no more than a tentative assumption, but I think "peace of mind" is tied to the categories of medical care and safety.

In terms of medical care, can't INS help with a medical information system and a medical care data base? I think the Ministry of Health and Welfare should take the lead in furnishing this. Information on "what to do when a child has a fever" could be obtained by means of facsimile or cathode ray tube.

Likewise, in terms of safety, information can be obtained by means of an earthquake prediction system and operational safety supervision system. It is my INS concept that such data bases can be used freely and at moderate prices.

[Question] NTT has designed a diversification of services and has begun selling as new products facsimile, automobile telephones, kanji (Chinese character) printers and the like. As for such services, the automobile telephone can be considered typical, but the price is high (installation and subscription fee is more than 80,000 yen; the basic monthly rate is 30,000 yen; and a cost of 10 yen per 6.5 seconds up to 160 kilometers). Wouldn't INS be expensive for the user?

[Kitahara] Digital technology is the basis for lowering the cost. Ultra-LSI's are representative of this. By increasing the level of integration, as from 64 kilobits to 256 kilobits to 1 megabit, the cost per information unit will quickly drop.

The automobile telephone is one example. In the beginning, NTT purchased them at 800,000 yen each. One hundred and some IC's were used. Today, four years later, connecting from Nagoya costs 480,000 yen; the number of IC's has decreased to around 70, about half. The size is about one-fourth and of course power consumption has declined.

I think that a cost of 200,000 to 250,000 yen is possible in about 4 or 5 years, or 1985. A memory of 256 kilobits and IC's with about 1,000 gates will be used and only about 20 IC's will be needed. Moreover, a 100,000 yen automobile telephone is in the midst of development.

[Question] Thus far, IC's have achieved a fourfold cumulative level in two years. May we see the reality of a 100,000 yen automobile telephone earlier than expected?

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[Kitahara] 256 kilobits is at the stage of being realized. As for whether the 100,000 yen automobile telephone can work on existing extension lines, a considerable breakthrough may be necessary.

Optical Communication, Decisive Factor in Lower Costs

[Question] Will digitalization lower costs for all telecommunications?

[Kitahara] With digitalization, switchboards and computers will be 30-50 percent cheaper. The same will be true for transmission systems. That alone can reduce investment costs for microwave, coaxial cable and repeaters.

Optical communication will clinch this even more. At present, microwave needs a repeater placed every 50 kilometers. Then less than 3,000 people in total can communicate simultaneously. Shifting to coaxial cable, it becomes possible for just under 6,000 people to communicate simultaneously. But an amplifier has to be installed every 1.5 kilometers along the route. Recently, a bridge in excess of 2 kilometers is not unusual, and amplifiers are attached along the bridge. There are problems with reliability because of swinging.

With optic fibers, an amplifier may be spaced 20 kilometers. Moreover, what is unusual about optics is that 24,000 people, a fourfold increase, can communicate simultaneously. That is because many channels are possible if the fibers are pure and uncontaminated. You may think of this in the same way that Mt. Fuji can be seen well on a clear day.

[Question] This means the cost per circuit will drop, doesn't it?

[Kitahara] Optical communication may be called the decisive factor resolving the infamous distance differential. At 60 to 1, it can be called the greatest differential in the world, and that bitter pill is accepted with resignation. I think that if optical communication becomes widespread, this difference will be reduced to almost zero. If it isn't reduced to zero, then INS itself won't materialize. It is a contradiction for a person living in Tokyo to pay a moderate rate while the person living in the provinces has to pay an extra rate to NTT in order to obtain the same information.

[Question] Here your concept of "information quantity-levied rate" has appeared, hasn't it?

[Kitahara] I presented the "information quantity-levied rate" concept in September last year and am having it researched by many people. In a word, the cost of sending information by using an information highway will be determined by the information sent. Given that information quantity equals transmission speed times use time, the faster the speed, the more the quantity of information which can be sent in one second. How much information can be sent in one second, the band, is similar to the concept of how much of the width of the road is used.

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[Question] But at present, it is said that when there is digitalization, the human voice will be sent at 64 kilobits. If so, it seems that the cost will be extremely expensive.

[Kitahara] Sending the human voice at 64 kilobits means, in digitalization, delimiting one second into 8,000 and furthermore arranging that into 8 steps in order to discern the voice perfectly. Since 64 kilobits is too extravagant, we are researching whether 32 kilobits or 16 kilobits won't work.

Since verbal response does not require voice quality, even 8 kilobits is extravagant. Certainly, when the idea of "information quantity-levied rate" is promoted on the assumption of 64 kilobits, the rate will be extremely high. That is why we are reexamining whether 64 kilobits is right or not. We intend to run various trials from 64 kilobits to 16 kilobits in 3 tests beginning in FY1982.

Moderately Priced Terminal Equipment From Private Sector

[Question] In each home, the telephone, of course, microcomputer, facsimile and cathode ray tube will be connected to one telephone line, won't they?

[Kitahara] It is not possible with copper wire. But with fiber optics it is possible to tie them into one telephone line.

[Question] In that case, will acoustic couplers which convert analogs into digital become unnecessary?

[Kitahara] Basically they won't be needed. Since the human voice is an analog, it is necessary to convert it into digital. The CODEC converter is one kind of IC. It now costs about 8,000 yen, but perhaps it will decrease to about 2,000 yen. There is no problem with a digital and analog junction if it is built into the telephone.

[Question] Conversely, since the coupler is expensive, INS won't progress as long as the coupler is necessary, will it?

[Kitahara] Reducing the price of the terminal as much as possible may be said to be the fundamental condition for INS.

[Question] How far will NTT go?

[Kitahara] It is a fundamental principle of ours to entrust all terminals to the private sector. NTT furnished the network. But my idea is that NTT will offer a common network and furnish a two-stage entry so as to be able to create an independent network for industrial use where the connection is simple and there are experts.

Take the facsimile as an example. Perhaps there will be someone who says, "transmitting by facsimile is great, but I may use many incorrect characters and phonetic equivalents. Since I don't want to be teased, I'll do it by telephone."

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In this case, a word processor in NTT's network can be used, NTT will furnish the "dictionary." Then a fee will be received for every word sent,

[Question] Won't every house be full of terminals?

[Kitahara] There will be compound terminals. The present Captain System is only an image, but with digitalization alone, the voice will be made to appear even without copper wire. It is now possible to use some televisions with an adapter attached to the tube.

But the demand for personal use CRT's will expand in proportion to the diversification of services. Certainly the price must drop with mass production. The purpose in asking Sony Corporation and Toshiba Corporation to participate is to try to lower the price of personal use CRT's. We have having Nippon Electric Company, Ltd., Fujitsu, Ltd., and Hitachi, Ltd. research an adapter which can be attached to the present television tube.

Successive Advent of New Fiber Materials

[Question] By the way, is there no use for man-made satellites in INS?

[Kitahara] Of course, it is necessary to build a communications net with satellites. Weather satellites are already large enough at present, but it will be necessary for broadcasting satellites and communication satellites to be larger. The satellite Japan will launch next year will weigh 350 kilograms, have a life span of 5 years and a capacity of 3,000 circuits.

America has already launched a one ton satellite. Its life span is 10 years and it has a capacity of 25,000 circuits. This difference is due to the difference in rockets. This is unofficial, but it is being said that America may launch Japan's communication satellite with the space shuttle, Columbia. It is said it can be done at roughly one-sixth the cost.

[Question] In terms of materials, will there be any new materials coming out?

[Kitahara] Gallium arsenide and Josephson's element are the new theoretical ones, but they cannot be used easily except in very low temperatures. Concerning semiconductor elements, I think for the time being we will go with today's silicon technology. However concerning optical fibers, I think that fibers with an extremely high degree of transparency will appear by using such new materials as fluorine. As I mentioned previously, a 20 kilometer transmission without a repeater is possible, but this will become incommensurable. For example, a 5,000 kilometer transmission without a repeater would be possible. If so, transmission from Tokyo to Hawaii will be possible without a repeater.

[Question] If so, will the laser output have to be increased?

[Kitahara] No. Since it will go far naturally if the fiber's transparency increases, I think it can be done with a normal semiconductor laser. At

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any rate, Japan is at the world's highest level in fiber optics,

[Question] It seems that there aren't many sensors in INS.

[Kitahara] Not at present, but in the future they should be used in many instances, such as in connection with a crime prevention system, remote control and unmanned stations.

[Question] A multi-faceted data base has to be developed but who will make it?

[Kitahara] That is a difficult question, but the government should consider it. It must be done without being caught up in red-tapism. I think that when all is said and done, we must spend more money on data.

(3) (4) (5) INS関連主要会社 (1)									
会社	項目 (2)	光	電	衛	フ	マ	自	C	コ メ ン ト (10)
		通	子	星	ア	イ	動	A	
		信	交	通	ク	コ	車	T	
		信	換	信	シ	ン	電	V	
			機		ミ	テ	話		
(11) 日本電気	○	○	○	○	○	○	○	○	総合力、衛星通信、デジタル電子交換機シェア50%前後 (12)
(13) 富士通	○	○	○	○	○	○			日電と双社、電算機利用システム技術抜群 (14)
(15) 沖電気	○					○	○		米AT&T社向け自動車電話納入実績NO.1 (16)
(17) 日立	○	○			○	○			公社依存度アップ、将来10-12%目標 (18)
(19) 東芝				○	○	○			公社納入弱く近年強化中 (20)
(21) 三菱電機				○	○				衛星用アンテナNO.1、人工衛星専用工場、画像処理技術 (22)
(23) 田村電機					○	○			ミニファクス送受信専用機独占生産 (24)
(25) 日本通信工業						○			マイコン電話対米向け先駆者 (26)
(27) 岩崎通信機						○			マイコン電話業界3位、対米向けに注力 (28)
(29) 大興電機						○			マイコン電話対米向け急増、沖グループ (30)
(31) 明星電気				○		○			マイコン電話公社向け急増、衛星通信部品生産 (32)
(33) 松下通信工業						○	○		自動車電話機、マイコン電話機業界トップグループ (34)
(35) 国際電気							○		自動車電話基地局大手3社の一角 (36)
(37) 安立電気	○			○					インマルサット(世界シェア20%)、データ・端末機に高シェア商品 (38)
(39) 日本無線	○			○					インマルサット(世界シェア30%)、無線技術優秀 (40)
(41) 住友電工	○								日電グループ、56年度50億円、57年度100億円、VAD法で顕光 (42)
(43) 古河電工	○								富士通グループ、CVD法、VAD法両方の製造技術有す (44)
(45) 藤倉電線	○								光通信三羽鳥の一角、技術力も抜群だが販売網弱い (46)

(47)日立電線	○						偏平光ファイバー開発等、日立グループの技術で底力発揮	(48)
(49)パイオニア						○	双方向型世界初めて開発(有線式)売り上げ50億円, 57年倍増	(50)
(51)アルプス電気						○	CATVコンバータ米向け急増中, 57年倍増へ	(52)
(53)クラリオン						○	無線式CATV実演目だつ	(54)
(55)ソコ				○			高速用トランプ(シェア60%強), 業界2位, 主に産業用	(56)

Key:

1. Major INS Related Companies
2. Items
3. Optical Communication
4. Digital Electronic Switchboards
5. Satellite Communication
6. Facsimile
7. Microcomputer Telephone
8. Automobile Telephone
9. CATV
10. Comments
11. Nippon Electric Company, Ltd.
12. Has all-around strength; holds approximately a 50 percent share of satellite communication and digital electronic switchboards.
13. Fujitsu, Ltd.
14. Together with NEC, it is one of the two largest manufacturers; pre-eminent in computer systems technology.
15. Oki Electric Industry Co., Ltd.
16. Number one in terms of results in supplying automobile telephones for America's AT&T.
17. Hitachi, Ltd.
18. NTT is increasing dependent on it; future target is 10-12 percent.
19. Toshiba Corporation
20. Weak supplier to NTT; trying to strengthen this in recent years.
21. Mitsubishi Electric Corporation.
22. Number one in satellite antenna; has man-made satellite plant; image process technology.
23. Tamura Electric Co., Ltd.
24. Monopolistic manufacturer of mini-facsimile transmitter-receiver for personal use.
25. Nitsuko, Ltd.
26. Pioneer in microcomputer telephones for the U.S.
27. Iwasaki Communications Equipment Co., Ltd.
28. Number three in the microcomputer telephone industry; concentrating its efforts toward the U.S.
29. Daiko Electric Co., Ltd.
30. Rapidly increased manufacture of microcomputer telephones for the U.S. and is part of the Oki Group.

31. Myojo Electric Co., Ltd.
32. Rapidly increased production of microcomputer telephones for NTT; manufactures satellite communication parts
33. Matsushita Communication Industrial Co., Ltd.
34. Top group in the automobile telephone and microcomputer telephone industry.
35. Kokusai Electric Co., Ltd.
36. One of three companies involved in automobile telephone base stations
37. Anritsu Electric Co., Ltd.
38. INMARSAT (world share of 20 percent); large share of products for data terminal equipment.
39. Japan Radio Co., Ltd.
40. INMARSAT (world share of 30 percent); superiority in radio technology.
41. Sumitomo Electric Industries, Ltd.
42. NEC Group; 5 billion yen in FY1981; 10 billion yen in FY1982; in the spotlight with the VAD system.
43. The Furukawa Electric Co., Ltd.
44. Fujitsu Group; manufacturing technology for both CVD and VAD systems.
45. The Fujikura Cable Works, Ltd.
46. One of the optical communications triumvirate; preeminent technology strength but weak in sales network.
47. Hitachi Cable, Ltd.
48. Demonstrates potential strength with Hitachi Group's technology, such as development of compressed optical fibers.
49. Pioneer Electronics Corporation
50. Developed the world's first double-throw type CATV (wire system); sales of 5 billion yen; to double in 1982.
51. Alps Electric Co., Ltd.
52. In the midst of rapidly increasing manufacture of CATV converters for the U.S.; moving toward redoubling in 1982.
53. Clarion Co., Ltd.
54. Noticeable results in radio system CATV.
55. Ricoh Company, Ltd.
56. Tops in high speed facsimile (more than 60 percent share); number two in the field; mainly industrial use facsimile.

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ECONOMIC

MITSUBISHI, CHRYSLER TO START JOINT PRODUCTION

MITI Minister's Request

Tokyo NIHON KEIZAI SHIMBUN in Japanese 24 Feb 82 p 1

[Text]

ITI Minister ABE on the 23rd reported to Mitsubishi Motors Board Chairman Tomio KUBO that the US Government is showing strong interest in the re-construction of Chrysler, which is suffering from financial difficulty, and virtually requested the said company to co-operate in the re-construction of Chrysler. At his talks with USTR BROCK in January, ITI Minister ABE expressed the Japanese Government's intention of giving indirect support for the re-construction of Chrysler. His request that day is due to the judgment that the Japanese Government should help improve Japan-US relations in which trade friction is intensifying, by urging Mitsubishi Motors to relieve Chrysler, from the standpoint of Japan-US industrial co-operation. In response to this, Board Chairman KUBO clarified the intention of tackling support in the fields of joint production of automobiles of new models and technological co-operation, in a forward-looking way.

ITI Minister ABE invited Board Chairman KUBO to a hotel in Tokyo on the morning of the 23rd, and held talks with him for about 45 minutes. At the talks, the ITI Minister stated that "When I held talks with Representative BROCK on my visit to the US in January, I realized that the US Government is deeply worried about Chrysler's financial difficulty, and at the same time has strong interest in the re-construction of that company." So saying, he conveyed the US Government's intention to Board Chairman KUBO. In response to this, Board Chairman KUBO showed a positive posture toward support for Chrysler, and also explained in detail the development to date, including the tie-up relationship between Mitsubishi Motors and Chrysler.

From the middle of January, MITI started studies on concrete measures to relieve Chrysler on the basis of the request by the US Government. The main points of the measures include: (1) Opening a way for Export-Import Bank loans for the re-construction of Chrysler, through Mitsubishi Motors which has tie-up relations with Chrysler; (2) urging Mitsubishi Motors to purchase Mitsubishi Motors' shares held by Chrysler and granting loans, with these

shares as security; and (3) promoting joint production of automobiles of new models by Mitsubishi Motors and its technological co-operation, for the recovery of Chrysler's competitive power in the US.

The Mitsubishi Motors side already announced the policy of "purchasing Mitsubishi Motors' shares held by Chrysler, at any time, if formally requested by Chrysler." As it showed, at the talks that day, its positive posture toward support in the fields of joint development of automobiles of new models and technological co-operation, the probability has become strong that Mitsubishi Motors' relief of Chrysler will materialize with the support of the Governments of Japan and the US.

For such reasons as the sluggishness of demand for its automobiles in the US and the delay in rationalization, Chrysler still had a deficit of \$400 million in the current account for 1981, though it showed improvement compared with the deficit of \$1,800 million in the preceding year, and it is having difficulty in raising funds, too. Therefore, it is doing its utmost for the re-construction of its management, by such means as selling its tank sector to General Dynamics, which is a major company in the US munitions industry, at the price of about \$350 million.

Starting of Preliminary Surveys

Tokyo NIHON KEIZAI SHIMBUN in Japanese 26 Feb 82 p 7

[Text]

Mitsubishi Motors clarified on the 25th that it had informally notified the Chrysler side of its intention to start preliminary surveys to produce Mitsubishi automobiles jointly with Chrysler in the US in the future. It is said that studies will be started on the following matters on the administrative level between the two companies within two or three months: (1) The trends of the small-car market in the US in 1984 and 1985; and (2) what models are suited for joint production in view of the balance of commodity plans between the two companies during the next several years. Mitsubishi Motors has so far taken the stand that (joint production) is premised on Chrysler's producing certain results as to improvement of productivity, quality control, etc. It explains that it has decided to start preliminary surveys for joint production, in parallel with its co-operation for the rationalization of Chrysler, because a period of about two years is required for preparations in order to carry out joint production. However, it is presumed that the said company also considered the fact that the US Government requested Mitsubishi Motors, through MITI, to co-operate in the re-construction of Chrysler.

At its top-level talks with Chrysler in September last year, Mitsubishi Motors had the Chrysler side approve sales of Mitsubishi automobiles through Mitsubishi's own sales networks in the US. At the same time, agreement was reached on the following points as to new tie-up relations between the two companies: (1) Technological co-operation will be pushed for the reduction of costs by such means as quality control and improvement

of productivity; and (2) joint production will be checked into after this has produced certain results. In response to this, Chrysler dispatched project teams on production technology, purchase control, and development of new cars to Japan in the fall of last year, and started exchange of technology with the Mitubishi side. The two companies will soon conclude a formal, comprehensive contract for the furnishing of technology, and Mitsubishi is scheduled to extend reimbursible technological co-operation on a full scale as to individual themes.

Recently, however, the Chrysler side made the following proposal through part-time Director R. A. PERKINS: "We want to start concrete studies on joint production, without delay." It is thought that behind this, there are circumstances where sales of Chrysler's small cars, such as Omni's and Horizon's, do not increase, on the one hand, while on the other, it wants to reduce the burden of development of new cars, requiring a huge amount of money, in addition to conducting various kinds of rationalization.

As to this, the Mitsubishi side maintained the stand of being unable to start concrete studies on joint production immediately, but agreed on preliminary surveys, saying that a certain period for preparations is required for joint production, even in the light of the tie-up between Honda Giken and BL of Britain, and that the start of actual production will be delayed greatly if it waits until the rationalization by Chrysler comes to the end of the chapter.

On the part of Mitubishi, there is the circumstance that its sales in the US do not amount to more than about 30,000 cars annually under the self-imposed restrictions on exports to the US, and that it is unable to increase sales greatly. From medium- and long-range points of view, too, there is the judgment that it is difficult to increase the export of finished cars to the US, and that it cannot but decide on production in the US in some form or other, sooner or later.

For the present, it will start preliminary surveys centering on the market trends around the year 1980, predicting that joint production will be started around that year at the earliest. A Mitsubishi leader says that "The two companies will carry out surveys separately, and they will carry out joint surveys, too, depending upon problems."

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SCIENCE AND TECHNOLOGY

LAST 'OFFENSIVE-DEFENSIVE BATTLE' OVER CONVERTER REACTOR

Tokyo SHUKAN TOYO KEIZAI in Japanese 14 Nov 81 pp 11-16

[Article by Masakuni Umezawa]

[Text]

-- The Japan-US negotiations on reprocessing have ended in failure. As a result, the significance of the advanced thermal converter reactor (ATR) has increased suddenly. However, a heated controversy is going on between MITI and the nine electric power companies over the organization to develop a proven ATR and the sharing of expenses. --

The greater the expectation, the greater the discouragement, when the expectation is not met. This was just the case with the Japan-US negotiations held on reprocessing four years ago. The recent negotiations on reprocessing, too, have turned out to be such a case.

According to the "Japan-US Agreement and Joint Communique Concerning the Reprocessing Problem" released in Japan and in the US simultaneously on October 31, the US "lifted the ban" on the preparatory work for the construction of a second reprocessing plant in Japan, which work it did not approve four years ago. However, the period for the operation of the Tokai Reprocessing Facility was still limited to three years. Also, the US side did not say a single word about re-cycling of plutonium obtained from light-water reactors, which re-cycling had been strongly desired by Japan.

True, this Joint Communique contains, in its last part, the statement that "For a 'permanent solution,' an arrangement, which is acceptable to both parties, will be made prior to the end of 1984." In accordance with this statement, the Foreign Ministry wants to "start consultations as early as at the beginning of next year" (Atomic Energy Division of the United Nations Bureau). In reality, however, it is likely to be true that "It will be difficult to expect a package solution in three years hence" (Research and International Co-operation Division of the Science and Technology Agency).

The allowable limit for reprocessing at Tokai, which limit previously was fixed at 99 tons a year, has been raised to 210 tons, or an amount equal to the present capacity of the Tokai Reprocessing Facility. This "expansion," however, does not have any practical significance, because the Tokai Reprocessing Facility is operating, as a matter of fact, only at the level of 60 tons a year.

The actual situation, therefore, is far from Japan's original goal, which was to gain the "right of self-determination" in regard to reprocessing. The unstable position of Japan, whose reprocessing enterprise is subject to the "life-and-death power" of the US according to Paragraph C, Article 8 of the Japan-US Atomic Energy Agreement, has not undergone any fundamental change.

Shock Dealt by Bombing of Iraqi Atomic Reactor

Kumao KANEKO, who is Director of the Atomic Energy Division of the United Nations Bureau of the Foreign Ministry, leaped to his feet, when he read the Joint Communique of the SUZUKI-REAGAN Summit Conference held in May this year. Paragraph 14 of this Joint Communique went as follows: "The President endorsed the view of the Prime Minister that reprocessing is of particular importance to Japan. The Prime Minister and the President agreed that the two Governments should promptly start consultations with a view to working out a permanent solution at an early date." This statement was exactly the same as that contained in the draft prepared by the Foreign Ministry. President REAGAN affixed his seal to the draft blindly.

Director KANEKO thought that President REAGAN is still different from former President CARTER who was rather stoically devoted to the policy of preventing nuclear proliferation, with the "withdrawal of plutonium, indefinite suspension of commercial reprocessing and suspension of the development of the fast breeder reactor (FBR)" as a slogan, and that Japan can now make a dash for a "permanent solution." It is no wonder that he chuckled to himself over this thought.

However, the situation changed suddenly on June 7, when the Israeli Air Force bombed an atomic reactor in Iraqi territory. Iraq is a signatory to the Nuclear Non-Proliferation Treaty (NPT), and has accepted inspection by the International Atomic Energy Agency (IAEA). Such an attack on this country was a demonstration of distrust toward the present system for the prevention of nuclear proliferation by Israel.

President REAGAN, who was greatly shocked by this incident, hastily rewrote his external atomic energy policy (policy of preventing nuclear proliferation), which he had promised to announce prior to the Ottawa Summit. By the new policy he announced on July 16, he confirmed again that "The prevention of nuclear proliferation is a supra-partizan pledge of the US." He also proposed the acceleration of the participation in the NPT by the nations not yet affiliated with this treaty, strengthening

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of the IAEA and the application of the IAEA's safeguards to all nuclear activities of the countries not in possession of nuclear weapons. President REAGAN thus started efforts to strengthen again the nuclear non-proliferation system led by the US.

Nevertheless, Japan remained optimistic. The reason is that the US President mentioned in his statement as follows: "The US will not ban or check reprocessing or the development of the FBR by private circles in those countries where there are advanced atomic energy programs and where there are no risks of nuclear proliferation." Japan thought that it doubtlessly is one of such countries.

However, the Japanese mission, which flew to Washington in late July to materialize the "permanent solution" promised by the Japan-US Joint Communique, was disgusted at the fact that the US side was not willing at all to start negotiations. The US side only reiterated that "The details of the nuclear non-proliferation policy have not yet been completed." When the Japanese side insisted on Japan's "right as a nation with an advanced program," the US side looked displeased, and asked, "Then, how does Japan think such countries as India and Pakistan should be treated?". In short, the US holds that the prevention of nuclear proliferation should be given priority over all the "rights of nations." As far as this position is concerned, there has been no change at all since the days of the CARTER Administration. Such being the situation, we must say that it was an important success of this Japanese mission that a promise to "continue consultations" was secured, at any rate, from the US side.

However, the world is as kind as it is cruel. It is the advanced thermal converter reactor (ATR) which suddenly began to attract attention, "thanks to" the failure of the negotiations on reprocessing.

ATR Suddenly Comes to Surface (?)

The ATR is a genuinely indigenous atomic reactor which has been developed by Donen (Power Reactor and Nuclear Fuel Development Corporation) as an "intermediate reactor," that is, a reactor which is intermediate between the light-water reactor and the fast breeder reactor (FBR). While the light-water reactor burns enriched uranium with the use of light water (ordinary water) as moderator, the ATR uses heavy water as moderator, and can burn plutonium and depleted uranium which are collected by the reprocessing of the fuel used by the light-water reactor. Already in 1979, a prototype reactor, "Fugen," went into operation. No other atomic reactor has so turbulent a career or has been subjected to so various criticisms as the ATR.

From the beginning, electric power industry circles have been indifferent toward the "intermediate reactor" called the ATR, because they hold that "We have no time to play loose, because we must advance directly from the light-water reactor to the FBR" (leader of an electric power company). In 1978, MITI and the electric power companies and Electric Power Development

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Company, which are under MITI's direct jurisdiction, decided to induct the CANDU-type reactor (heavy-water reactor of the Canadian type), which, like the ATR, is a heavy-water reactor. It is still fresh in our memory that a fierce controversy occurred between MITI and these companies, on the one hand, and the Atomic Energy Commission and the Science and Technology Agency, which thought that this decision is a "plot to squash the ATR," on the other.

The confrontation between the federation of Donen and the Science and Technology Agency, which were to take charge of the development of the ATR, and the federation of electric power companies and MITI, which maintained an indifferent attitude, was brought into the Atomic Energy Commission's department of experts (department of experts for appraisal and study of proven reactors), which department was to determine whether to build a proven ATR as a step following the construction of a prototype reactor, "Fugen."

The report, which was drawn up in July this year, or after the lapse of four months from the establishment of a drafting committee, revealed the conclusion that "It is proper to build a proven reactor with an output of 600,000 kilowatts." In many respects, this report reflects the fierce controversies that took place at the meetings of the committee.

For instance, the report contains the following statement: "It is desirable, at present, to push the development of the ATR by Government-private co-operation so that the ATR can be incorporated into the system of atomic power generation, although the date for the starting of the practical use of the FBR and the use of plutonium for light-water reactors must be taken into consideration." It can be seen that this statement left room for a change in the future, by reducing the precondition in the original draft to mere "consideration" and inserting the words "at present." This is typical of what is called the weasel-worded statement.

Also, the draft, which was prepared by the Science and Technology Agency, contained a statement calling for "Government-private co-operation." The electric power companies, however, forcibly changed this statement to one calling for "development by Government-people co-operation." Similarly, the statement that "It is desirable to substitute the ATR for 25 per cent of the planned light-water reactors," which statement was contained in the original draft, was simply deleted.

"We Co-operated, But ..."

The electric power companies frown upon the ATR, because this reactor does not pay well. "This reactor, which is called the advanced thermal reactor (ATR), is not advanced, as far as the burning rate is concerned. The electric power companies cannot take a cool attitude, because they helped FS. How should we meet such a situation?" (Chairman Toshio ITO of Atomic Power Generation).

It is expected that the cost of generating electric power by the first proven ATR in its first year of operation will be twice that in

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the case of generation by a light-water reactor, and that the average cost in 16 years will be stabilized at a level 30 per cent higher than the same. However, the conversion ratio of the ATR is 0.7, or about the same as that of the light-water reactor which is 0.6. Moreover, the development of the ATR is still at a stage, where it is being planned to build a proven reactor with an output of 600,000 kilowatts, while the light-water reactor is entering a period, in which its output will be increased to 1,300,000 kilowatts. The site efficiency, therefore, is very poor. "It is said that the cost of generating electric power by the ATR (average cost in 16 years) will be about the same as that of thermal power generation using coal. However, the problem of location, which must be solved for atomic power generation, is entirely different from that in the case of thermal power generation, although the situation may change, if it becomes possible to build many atomic power plants easily."

Even the electric power companies, however, cannot but admit that the "significance of the existence" of the ATR has increased, since the Japan-US Joint Communiqué concerning reprocessing was issued in October. They are contemplating the plu-thermal formula (burning of plutonium in a light-water reactor) as a temporary method to make use of plutonium until the FBR is put into practical use. In the recent Japan-US negotiations on reprocessing, however, the US side ignored Japan's desire to put the plu-thermal formula on a commercial basis. It said peremptorily as follows: "We do not have any plan concerning the plu-thermal formula. So, we do not want to be asked any further about it."

It is no wonder that the US side took such an attitude. Approval of the plu-thermal formula means the recognition of the right to make use of plutonium to all the countries which have light-water reactors. In such an event, there can be no prevention of nuclear proliferation.

On the other hand, the ATR is an indigenous reactor developed by Japan independently, and "Even the US recognizes that the commercial use of plutonium by means of this reactor does not involve any problem" (Science and Technology Agency). If so, the only way for Japan to make use of plutonium is to burn plutonium by the use of the ATR, and expand its right of reprocessing by the accumulation of such accomplished facts. "The ATR can be used, at any rate, as a kind of insurance, though not in a positive way" (Vice-President Ichiro HORI of Tokyo Electric Power).

Total War between MITI-Electric Power Development Alliance and Electric Power Companies

The actual situation, however, does not permit at all the starting of the construction of a proven ATR at once. Three months have already passed since the Atomic Energy Commission's department of experts presented its report. No agreement has been reached until now, however, on the problems of top importance, such as the designation of an organization to take charge of the construction and the sharing of the expenses by private circles.

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For the designation of the organization to take charge of the construction, it can be proposed to select one of the nine electric power companies, Electric Power Development or Atomic Power Generation, or establish a new, semi-governmental organization. The nine electric power companies, however, are not inclined at all to build a proven reactor themselves. Also, the prospect for the establishment of a new, semi-governmental organization is dim, at this time when the Government is going to carry out an administrative reform.

Atomic Power Generation is not prepared at all to take upon itself the task of building an ATR, because the first reactor at its Tsuruga Plant has just been involved in an accident, and because it has already been preoccupied with the task of supervising the construction of a prototype FBR, "Monju," and making preparations for the construction of a second reactor in Tsuruga.

Electric Power Development, which is the only remaining candidate, sent 50 technological experts to the site of construction of "Fugen," a prototype ATR. Even at present, it keeps a little more than ten experts at the site, for the operation of this reactor. Also, the basic position, which is maintained by leaders of Electric Power Development, is as follows: "This company is a national policy company. So, it cannot but do whatever is ordered by the State after the establishment of necessary conditions." It is clear, from both the objective and subjective points of view, that Electric Power Development is the only organization that can take charge of the construction of the ATR.

Over the question to which there is only one answer, however, a fierce controversy is going on between MITI and the electric power companies.

Atomic Power -- Sincere Desire of Electric Power Development

MITI wants to give atomic power to Electric Power Development, which is under its direct jurisdiction, by all means. As a matter of fact, Electric Power Development has harbored a cherished desire to advance into the field of atomic power generation, for a long time since it went into a dispute with Atomic Power Generation over a gas cooling reactor. For the realization of this sincere desire, MITI and Electric Power Development exerted all efforts to introduce a CANDU-type reactor. At the last moment, however, they were prevented from doing so by the Atomic Energy Commission and the Science and Technology Agency.

MITI and Electric Power Development have not yet formally given up hope for the CANDU-type reactor. In the skeleton budget plan they presented for fiscal 1982, they earmarked a sum of ¥2.1 billion for over-all technological assessment. The environment around the CANDU-type reactor, however, has become quite different from that in 1978.

The CANDU-type reactor can burn natural uranium directly, and Canada guarantees a stabilized uranium supply to the purchaser of this reactor.

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So, this reactor has been advertized as a reactor which will enable its user to decrease the dependence on the uranium-enriching capacity of the US, and at the same time, escape from the burden to be imposed by the rise in uranium prices. The world now sees, however, an oversupply of enriched uranium due to the expansion of equipment by URENKO of West Germany and Eurodif (TN: phonetic) of France. Also, a prospect has been established for the securing of enough uranium resources to meet demand until the year 2020. In brief, there are no longer any convincing grounds for arguing for the introduction of the CANDU-type reactor.

Then, Electric Power Development has no choice but to grasp the ATR, if it wants to advance into the field of atomic power generation. Moreover, the possession of the ATR, which is a national policy reactor, will give Electric Power Development an excellent excuse for containing the attack to be directed against this special corporation as an object of administrative reform. Then, the four posts within this company (post of President and three posts of Director), which posts are available for the retired ITI Vice-Ministers and MITI bureau directors-general, will remain safe.

On the other hand, it is clear that the possession of the ATR, which costs ¥300 billion to ¥400 billion in the case of a proven reactor and the operation of which on a paying basis is in doubt, is a very risky adventure for MITI. As a matter of fact, an uneasy feeling has been revealed, in whispers, within MITI as to "Whether it is safe to entrust this reactor to the superannuated technicians of Electric Power Development who do not have experience in handling commercial reactors."

For the reduction of the big risks, a forcible step must be taken to "involve" the private electric power companies in this undertaking. "We do not permit the private electric power companies to take the attitude of an onlooker toward construction of a proven reactor by Electric Power Development. They will be asked to provide most of the funds necessary for this project. Perhaps they must contribute two-thirds or even more. Furthermore, it is useless to develop the ATR, unless this reactor is to be used as a commercial reactor in the future. The electric power companies, therefore, must give the commitment that they, too, will use this reactor in the future" (Atomic Power Generation Division of the Resources and Energy Agency).

"Last Resistance" by Electric Power Companies

True, the economical character of the ATR will improve, if the use of this reactor by private electric power companies in the future is promised. These companies, however, will not give such a commitment in any way, unless it is proved that the capacity of this reactor can be expanded and that the cost of generating electric power by this reactor can be reduced to the level in the case of power generation by light-water reactors. "We think that the department of experts certainly produced an agreement on the construction of only one proven reactor. Why is such a problem taken up

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now?" (leader of an electric power company).

On the part of the nine electric power companies, there is still a latent but strong crisis-feeling that the possession of atomic power by MITI and Electric Power Development in advance will open a way for administrative authorities to launch "aggression" on private circles. At the time of the dispute over the CANDU-type reactor in 1978, Chairman Gaishi HIRAIWA of the Federation of Electric Power Companies stated that "It may be good to build one or two test reactors." This statement created the general impression that the electric power companies permitted Electric Power Development to start atomic power generation. However, it is said as follows: "That statement only reflected the view prevailing at that time. The way of thinking is always changing. A conclusion has not yet been reached at the conference of Presidents (on whether to permit Electric Power Development to have atomic power)" (leader of an electric power company). The nine electric power companies are offering silent resistance against the ATR, including the problem of sharing the expenses for the construction of this reactor.

It can be thought that the present policy of the nine electric companies is to keep MITI irritated, and wait until MITI offers a compromise as bait. As a matter of fact, the ATR is not the only expensive item related to the development of atomic energy. The Government and private circles are confronting each other over the sharing of the expenses for the construction of a second reprocessing plant and that of a uranium-enriching plant as well. Also, it is a big problem how to meet the cost of scrapping light-water reactors. The nine electric power companies want to step up the multilateral co-ordination of opinions on the sharing of these expenses, with the ATR as hostage. There are also indications that these companies are planning to secure the release of the shares of Electric Power Development to private circles, in return for the transfer of the proven ATR to Electric Power Development.

Acting Chairman Takashi MUKAIBO of the Atomic Energy Commission says that "We do want to clarify, in the long-term plan for the study, development and use of atomic energy, which plan is in the making at present, and what organization should take charge of the construction of the proven ATR." If this policy is to be followed, the present problem will come to a settlement, in some form or other, by the end of this year or the end of the present fiscal year.

Until such a time, "negotiations" will be continued beneath the surface. As consumers, however, we must make it clear that we cannot permit the expenses for the development of atomic energy, including the proven ATR, to be met by the raising of electricity rates, as a result of a "compromise" between MITI and the nine electric power companies.

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SCIENCE AND TECHNOLOGY

SPACE TREATIES KEPT ON THE SHELF

Tokyo NIHON KEZAI SHIMBUN in Japanese 18 Feb 82 p 4

[Text]

The space treaties, which provide for such steps as payment of compensation to the victims of fallen artificial satellites, have been kept on the shelf due to the "jurisdictional dispute" among the Ministries concerned. These treaties have remained unratified for nearly ten years. So, there is the possibility that the victims of fallen satellites in Japan will be compelled to bear silently. Also, the satellites launched by Japan are "unregistered satellites" in the eyes of the treaty. Japan occupies third place in the world, though far behind the US and the Soviet Union, as a country active in outer space. Among other nations, there is the growing criticism that "Japan is unco-operative and irresponsible in the field of space activities." The Foreign Ministry has decided that "The international confidence in Japan will be damaged, if such a situation is left as it is," and has firmed up its plan to urge other Ministries concerned strongly to hurry the co-ordination of views for the early ratification of the space treaties.

The space treaties provide for the concrete rights and duties of nations, international regulations and procedures, on the basis of the "Outer Space Treaty" (took effect in 1967) which laid down the principles for the peaceful use of space, including the ban on the launching of weapons of mass destruction into outer space. They consist of the following two treaties and one agreement: (1) The "Agreement on Rescue and Return" (took effect in 1968), which provides for the obligation to rescue or return astronauts or objects launched into outer space; (2) The "Damage Compensation Treaty" (took effect in 1972), which provides for the responsibility of nations to pay compensation for the damage done by fallen satellites; and (3) the "Registration Treaty" (took effect in 1976) which provides for such matters as compulsory registration of satellites. Japan has ratified the "Outer Space Treaty," but not yet the two treaties and one agreement which have essential importance. Most of the principal nations of the world, including Europe, the US and the Soviet Union, have already joined these treaties and agreement. Especially, the "Damage Compensation Treaty" has been ratified by more than 70 nations.

Of the two treaties and one agreement, the "Damage Compensation Treaty" has direct bearing upon the people. If an object launched into outer space,

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such as the wreckage of an artificial satellite or rocket, falls to earth and causes damage, the country, which launched that object, must unconditionally bear the responsibility to compensate for the damage. Japan, however, is not yet affiliated with this Treaty. So, a Japanese victim has no alternative but to file a suit with the law court of the launching country as an individual. "In reality, there is the big possibility that the victim will be compelled to accept the incident as his fate" (Foreign Ministry source).

Until now, the Soviet Union has launched 1,500 artificial satellites into outer space, the US -- 900, and Japan -- 22. Including the fragments of rockets, the total number exceeds 10,000. Most of the objects launched into outer space are exhausted and burn up before they enter the atmosphere again. In some cases, however, these objects fall to the earth. It was in January, 1978 that an atomic energy satellite, which had been launched by the Soviet Union, fell in northern Canada. This incident shocked the whole world. In recent years, both the US and the Soviet Union have launched many reconnaissance satellites. The reconnaissance satellites, which are heavy and fly at a low altitude, do not burn themselves out easily.

Japan is unable to ratify the space treaties, because the revision of the related internal laws has been hindered by the "friction" among the Ministries and Agencies concerned. In 1979, the Science and Technology Agency drew up the outline of a "bill concerning compensation for the damage done by spacecraft, etc.," clarifying such ideas as follows: (1) if a satellite launched by Japan causes damage to other countries, the launcher must bear no-fault liability for compensation, and the State has a right to indemnity; and (2) the launcher is subject to State-imposed controls. MITI, however, asked the Science and Technology Agency to "wait," saying that "Space development, which is an industry to be developed hereafter, should not be planned by the Science and Technology Agency alone." The Postal Services Ministry contended that "Communications satellites are under our jurisdiction." The Meteorological Agency said that "We are concerned with meteorological satellites." The Transportation Ministry said that "Our position must be considered, because the US space shuttle is a future vehicle." The Education Ministry asked "In what way will the scientific satellites of the Space Research Institute of Tokyo University be treated?". As a result, the bill drawn up by the Science and Technology Agency "disintegrated in the air." The Science and Technology Agency, which is an "aggregation" of officials from the outside, was shaken by the unexpected "intervention" from other Ministries and Agencies. Recently, it has become somewhat bearish, because there is the view that "It can scarcely occur that Japanese satellites flying at a high altitude will fall to the earth."

Both the Lower and Upper Houses of the Diet passed resolutions calling for the early ratification of the space treaties in February and March, respectively, 1978. Also, the Space Development Committee, which is the Prime Minister's advisory organ, expressed hope for early ratification in July, 1977, saying that this step "is necessary and profitable for the smooth acceleration of space development by Japan."

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Among those concerned with space development, there is strong criticism against the posture of the Government, which they say "is frowned upon internationally." The Foreign Ministry has revealed its intention to hurry the co-ordination of views, saying as follows: "It may be impossible to have the treaties ratified in the present Diet session. However, the image of Japan among other nations will worsen, unless this task is carried out by next year's Diet session, at the latest."

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SCIENCE AND TECHNOLOGY

TELECOMMUNICATION LIBERALIZATION EXAMINED

Tokyo NIHON KEIZAI SHIMBUN in Japanese 18, 19, 24, 25 Feb 82

[18 Feb 82 p 3]

[Text]

Postal Services Ministry Tele-Communications Policy Bureau Director General MORIZUMI held a press conference on the 17th, and stated as follows on the problem of liberalizing data communications: "In regard to the revising of the Public Tele-Communications Law this time, private information and communications enterprise operators will not be permitted to offer high-level information and communications services (VAN)." So saying, he clarified the outlook that the contents of the proposed liberalization of data communications will be limited to fields excluding high-level information and communications services, for the time being. Therefore, the possibility has also appeared that the overall opening of the market for data communications, as sought by information and communications business circles and the economic and industrial circles, will be delayed on a large scale.

In connection with the problem of liberalizing data communications, the Government-LDP side has already decided on a policy to incorporate a revised Public Tele-Communications Law in a "package bill concerning the re-adjustment or rationalization of [projects which require] permission or approval," instead of enacting a new law. At the press conference held on that day, MORIZUMI also said, "The actual situation is such that this time, the enactment of a new law (as called for by the Postal Services Ministry) has become difficult." Thus, he formally expressed his intention to give up submitting a new data-communications bill (bill concerning added-value data transmission services) to the current Diet session.

However, the Postal Services Ministry says, "The preconditions (including the preservation of communications secrets) for the liberalizing of high-level information and communications services as to private information and communications enterprise operators have still not been established (through negotiations with MITI)" (Bureau Director

General MORIZUMI). Thus, the Ministry plans not to include the liberalization of high-level information and communications services (added-value data transmission services) in the Public Tele-Communications Law Revision Bill, though it had decided to do that.

As for the revising of the Law this time, the proposed liberalization will be limited (1) to "joint use" of communications circuits by two or more companies, and (2) to "use by others," in which private communications enterprise operators will lease communications circuits from the Nippon Telegraph and Telephone Public Corporation and sub-lease them to other enterprises, and which will not be accompanied by any message exchange (meaning the transmitting of information as is, without changing the contents thereof, as in the case of the telephone). This means that approval will virtually not be granted to the liberalization of message exchange, which liberalization will be indispensable for private information and communications enterprise operators to offer high-level information and communications services, or to the connection of public communications circuits, specific communications circuits, and public communications circuits (so-called public-specific-public connection) which is necessary for the establishment of information-processing networks.

On the other hand, MITI intends to seek strongly the Postal Services Ministry's overall opening of the market for data communications, on the strength of the Provisional Administrative Affairs Research Council's recommendation calling for the overall liberalization of data communications. For this reason, the focal point has shifted to the problem of whether the proposed liberalization in the field of high-level information and communications services will be incorporated in the Public Tele-Communications Law Revision Bill this time.

[19 Feb 82 p 3]

[Text]

The problem of whether efforts should be made to cope with the proposed liberalization of data communications through the enactment of a new law (data communications law) or through the revising of the existing law (Public Tele-Communications Law), on which problem the assertions of the Postal Services Ministry and MITI were in a sharp conflict, has come to an end along the line of revising the Law now in force, with the Postal Services Ministry's having given up establishing a new law. The reason for this is that the Postal Services Ministry's view urging the establishment of a new approval or permission system was not accepted, due to the large-scale current of administrative reform, calling for the re-adjustment or rationalization of [projects which require] approval or permission. With this as a turning point, however, the Ministry has shifted to the tactic of restricting the liberalization this time. The focal point is whether high-level communications services, which can also be said to be the

nucleus of the proposed liberalization of data communications, will be included among the objects of the liberalization through the revising of the Law this time. The Postal Services Ministry intends to give up liberalizing high-level communications services, but MITI and industrial circles concerned are showing strong repulsion against this. The problem of liberalizing data communications will enter its second round of development as to how far the scope of liberalization should be expanded.

"Has the Postal Services Ministry really given up enacting a new law?" News about Postal Services Minister MINOWA's statement, which said that "the Postal Services Ministry has given up enacting a new law," was conveyed to the Government-LDP side on the 16th. At that time, MITI leaders looked as if they were unable to quite believe [the news]. On the other hand, the Postal Services Ministry administrative officials concerned were also bewildered, as they were unable to grasp the real intention of the Postal Services Minister.

The major reason why a decision was rapidly reached to give up the planned enactment of a new law, was the Provisional Administrative Affairs Research Council's second recommendation calling for the re-adjustment or rationalization of the approval or permission system. The Government-LDP side earlier decided to cope with the proposed liberalization of data communications through a "bill concerning the package handling of the re-adjustment or rationalization of the approval or permission system." The atmosphere within the LDP was as represented by the view that "such a bill (as a new bill called for by the Postal Services Ministry), which will necessitate the granting of approval or permission, cannot be included in the proposed bill calling for the re-adjustment or rationalization of the approval or permission system" (LDP Administrative and Financial Affairs Research Council Chairman HASHIMOTO). Moreover, at a Cabinet meeting, slated for the 13th, the Government will decide to "respect the Provisional Administrative Affairs Research Council's recommendation." The large-scale current of administrative reform by the Government and the LDP as one body can be said to have become connected with the settlement of the problem in the form of revising the Law now in force.

However, the Postal Services Ministry has not made overall concessions, though it has given up the planned enactment of a new law. Rather, it is resorting to the tactic of rolling back with the substantial contents, in place of discarding the formal problem of whether [the situation should be settled] through the enactment of a new law or through [the revising of] the Law now in force. The first step for that purpose was the emergency press conference which Postal Services Ministry Tele-Communications Policy Bureau Director General MORIZUMI held on the 17th. MORIZUMI definitely stated as follows: "The preconditions (including the preservation of communications secrets and co-ordination of fields between private industrial circles concerned and the Nippon Telegraph and Telephone Public Corporation

[NTT]) for the liberalizing of high-level communications services (VAN) as to private information and communications enterprise operators have still not been established through negotiations with MITI. If, this time, efforts are to be made to cope with the situation only through the revising of the Law now in force, private information and communications enterprise operators cannot be permitted to offer high-level communications services."

This means that the Postal Services Ministry is still not changing its posture, to the effect that high-level communications services cannot be extended except under a new law. It also says that it will give up the proposed liberalization in the field of high-level communications services, in which field it has been planning to carry out partial liberalization in the form of enacting a new law, if it is said that the existing Law alone should be revised. It is thus carrying out operations to submit a new bill to the next Diet session, as expected at the very beginning, with its usual persevering posture seen when the three Ministers reached agreement on the establishment of a new postal individual annuity system and the handling of the Postal Savings Deliberation Council's recommendation. When asked if "this will result in delaying the liberalization of data communications," Bureau Director General MORIZUMI replied, "The Government office, which has jurisdiction over the data communications-connected legislation, is the Postal Services Ministry. His logic is that unless the Postal Services Ministry moves, the bill cannot be submitted [to the Diet]."

If the Postal Services Ministry's assertions are to be accepted, then the proposed liberalization will be limited to the following cases through the revising of the Law this time: (1) "Joint use" of communications circuits by two or more companies; (2) "use by others," in which private information and communications enterprise operators will lease communications circuits from NTT and sub-lease them to other enterprises, and which will not be accompanied by any message exchange (meaning the transmitting of information as is, without changing the contents thereof, as in the case of the telephone); and (3) the connection of computers through the use of personal circuits. This means that approval will virtually not be granted to the liberalization of message exchange, which liberalization will be indispensable for private information and communications enterprise operators to offer high-level information and communications services, or to the connection of public communications circuits, specific communications circuits, and public communications circuits, which connection is necessary for the establishment of information-processing networks.

This field of high-level communications services is a star field in regard to the liberalization of data communications. Unless that field is liberalized to private information and communications enterprise operators this time, the realization of the future image of the

data-communications liberalization age, in which simultaneous conferences will be held on the television screen, for example, between the Tokyo head office and its branch offices in Sapporo, Fukuoka, and other remote areas, will be delayed to that extent.

Therefore, from the stand that "if the field of high-level communications services is not liberalized, it will decrease the meaning of liberalizing data communications," MITI intends to carry out strong activities to secure the inclusion of the liberalization of the high-level communications service field in a revision bill concerning the Law now in force. It is the Provisional Administrative Affairs Research Council's second recommendation which supports MITI's assertions. The recommendation notes as follows: (1) In connection with the use of data-communications circuits, liberalization should be carried out, with the exception of the system of exchanging messages alone, with an unspecified large number of persons as the objects; (2) in order to clarify the scope of the minimum necessary degree of restrictions, a negative-list formula (formula calling for liberalization in principle and also the listing of plans which cannot be carried out) should be adopted; and (3) in regard to mutual connection, the standards for granting approval should be clarified when a separate-approval system is carried out. In short, the recommendation calls for the overall liberalization of data communications.

The proposed liberalization of data communications cannot but be said to be incomplete unless the field of high-level communications systems and exchange of messages are liberalized. In that meaning, future negotiations between the Postal Services Ministry and MITI on the scope of the substantial liberalization may be said to be an important testing place, from the standpoint of liberalizing data communications.

(Note) High-level communications services (VAN) mean that data will be exchanged and processed, between the data communications systems of different companies through the connection of their own respective computers with NTT's communications circuits, and through the establishment of networks which will use those computers as switchboards. This is the most developed form of data communications. Private information and communications enterprise operators are planning such services as a future image of data communications services. They are also said to be added-value communications services.

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The Postal Services Ministry's and MITI's Ways of Thinking as to Liberalization of Data Communications

	Postal Services Ministry	MITI
(1) Joint use (by companies which have continuous business relations)		
No message switching	Liberalization in principle	Liberalization in principle
Message switching	Only between companies which have close business relations	Liberalization in principle
(2) Use by others		
No message switching	Liberalization in principle	Liberalization in principle
Message switching		
Between specific persons	Report system*	Liberalization in principle
Between non-specific persons	Approval system*	Liberalization excluding message switching which will impede services by NTT
(3) Mutual connection		
Public circuits-specific circuits	Liberalization excluding message switching	Liberalization in principle
Public-specific-public circuits	Separate approval	Liberalization in principle

(Note) The asterisked systems will not be included in the revising of the Law this time.

[24 Feb 82 pp 1-2]

[Text]

The Postal Services Ministry formulated the general outline of a Public Tele-Communications Law revision bill in connection with the problem of liberalizing the use of data communications circuits, and obtained the general approval thereof at a meeting of the LDP Policy Board Communications Department (Chief: Yoshihide MORI), held on the

morning of the 24th. The general outline has been drawn up, accompanying the fact that in response to the Provisional Administrative Affairs Research Council's second recommendation concerning the proposed re-adjustment of the approval or permission system, the planned submitting of a new bill (data communications bill) to the current Diet session has been given up. Under the general outline, the utilization of data communications circuits, which utilization is banned at present, will be liberalized to a rather great extent, in the information-processing field. However, it blocks the road leading to the liberalization of high-level communications services (VAN) which are expected to develop in the future. The Ministry will submit its revision bill general outline to the Administrative Management Agency on the same day. However, MITI and the Administrative Management Agency are showing repulsion against the Postal Services Ministry's second draft on the strength of the Provisional Administrative Affairs Research Council's recommendation calling for the overall liberalization of data communications. Complications will probably arise before the problem can be settled.

In regard to data communications, information will be processed through the direct connection of computers and communications functions, as in the case of the National Railways' Green (TN: First Class Ticket) Windows and the banks' on-line systems. They are said to be the third communications, after telegraph and the telephone. At present, restrictions are being carried out on the private information and communications enterprise operators' leasing exclusive-use circuits from the Nippon Telegraph and Telephone Public Corporation (NTT) and their processing information. Industrial circles concerned have strongly criticized that this has been impeding the development of industries.

At the very beginning, the Postal Services Ministry had planned to liberalize the use of data communications circuits through the revising of the Public Tele-Communications Law now in force, and also through the enactment of a new data communications law. It had also intended to put up a new net of approval or permission over the field of data communications in the form of establishing a new law. The LDP Administrative and Financial Affairs Research Council, etc., criticized this plan, from the stand that it "will go against the current of administrative reform." The Ministry has finally decided to give up enacting a new law and to submit a revision bill as to the existing Law to the current Diet session.

Under the Postal Services Ministry's second revision-bill general outline, the use of communications circuits by companies, which have business relations with each other or with one another, will be liberalized, in regard to the "joint use" of such circuits by two or more companies. Also, as regards the exchange of messages (meaning the transmitting of information as is, without changing the contents thereof, as in the case of the telephone), it will be approved, for the first time, if it is to be carried out between or among companies

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which have close business connections with each other or with one another. It will become possible to establish communications systems, for example, between manufacturing industrialists and retail business-persons, between tourism enterprisers and hotel-keepers, and between transportation enterprisers and warehousing enterprisers, which systems have been banned up until now.

With regard to "use by others," which is regarded as a focal point, from the standpoint of fostering and developing the private information and communications services, and in which information and communications enterprise operators will lease circuits from NTT and sub-lease them to other enterprises, it will be liberalized if it is for data-processing purposes. However, in regard to high-level communications services which will be accompanied by the exchange of messages, and which the Postal Services Ministry had planned to incorporate in the proposed new law, [the liberalization thereof] will not be approved, partly for the reason that "it is impossible to preserve communications secrets through the revising of the Law now in force." Therefore, under the Postal Services Ministry's draft plan, it will be impossible for private information and communications enterprise operators to offer such high-level communications services as computer communications services or mail services (services for transmitting documents for office automation).

Moreover, concerning the connection of public communications circuits, specific communications circuits, and public communications circuits (so-called public-specific-public connection) which will become indispensable for private information and communications enterprise operators to offer information-processing networks, it will be placed under an individual approval system, on the grounds that there is fear of its causing the utilization of services similar to telegraph and telephone services which are the regular services of NTT. The connection of public communications circuits with specific communications circuits (public-specific connection) will not be approved, either, in the case of carrying out message exchange.

* * * * *

Far Removed from Overall Liberalization; MITI to Show Repulsion

In connection with the Postal Services Ministry's draft plan for the liberalization of data communications, MITI intends to show strong repulsion, from the stand that the exchange of messages in regard to use by others will be limited in actual substance, and that it is far from the overall liberalization of data communications, as sought by MITI up until now. It also intends to press for a large-scale revision of the Postal Services Ministry's draft plan.

In regard to the Postal Services Ministry's draft plan, MITI has particularly taken up the following points as problems: (1) The

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information-processing system (such as mail services), including message exchange as to use by others, has not been approved, and the proposed use by others will also be inconsistent with the Provisional Administrative Affairs Research Council's recommendation calling for liberalization in principle; (2) in the case of use by others, the scope of liberalization will be limited, when compared with joint use, and this will be disadvantageous for medium and small enterprises which cannot but rely on the networks to be established by information-processing enterprisers; and (3) the concrete contents of the planned liberalization are not clear, because they will be decided on the basis of the Postal Services Ministry Ordinance or on the basis of the standards for granting approval.

MITI plans to sound out the Postal Services Ministry on its way of thinking as to these concrete problematical points and to seek the revising of the Public Tele-Communications Law in the form of following MITI's basic policy for securing the overall liberalization of data communications.

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Gist of the Postal Services Ministry's Draft Plan for Liberalization of Data Communications

Following is the gist of the Postal Services Ministry's draft plan for liberalizing the use of data communications circuits:

1. Joint Use of Specific Communications Circuits: The individual approval system concerning the joint use of specific communications circuits shall be abolished, and at the same time, the Postal Services Ministry Ordinance shall be revised as follows:

(1) Necessary communications for services, which have continuous transactions, can be freely established if they are for data-processing purposes.

(2) If they are State organizations, local public entities, two or more persons who engage in the same line of business, or persons who have close business relations with each other, [the use of communications circuits], including the utilization of telegraph and telephone services, can be freely secured, though it has not been approved up until now.

2. Joint Use of Public Communications Circuits: Restrictions on the joint use of electronic computers, etc., shall be abolished, with regard to contracts for the use of public communications circuits.

3. Use of Specific Communications Circuits by Others: The standards concerning use by others, as set forth in Paragraph 1, Article 55-13 of the Public Tele-Communications Law, shall be revised, while

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Postal Services Ministry's Draft Plan for Liberalization of Data Communications

Joint use	Expansion of Scope	Plan for Coping with the Situation	Method of Coping with the Situation
	Approval for message exchange	Restrictions on the scope will be abolished, and necessary communications for services will be possible. Message communications, which will inevitably arise, accompanying the incomplete processing by computers or of data, will become possible, and in the case of having close business relations, liberalization, including the use of telegraph and telephone services, will be carried out.	Revision of the Postal Services Ministry Ordinance Revision of the Postal Services Ministry Ordinance
Use by others	Easing of restrictions Approval for message exchange	Use of circuits for data-processing purpose will be free. Possible only for communications which will inevitably arise, accompanying the incomplete processing by computers or of data, which processing will not become communications services. Connection to customers' computers will be possible	Revision of standards for approval Revision of standards for approval
Mutual connection	Establishment of connection to computers Abolition of the individual approval system Connection of public, specific, and public communications circuits	Connection of public and specific communications circuits will be free, unless message exchange is carried out. Connection of public, specific, and public communications circuits will also be possible under an individual approval system.	Addition of one article to the Public Tele-Communications Law Revision of the Public Tele-Communications Law Revision of the Public Tele-Communications Law

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restrictions on use by others shall be eased on a large scale, in order to enable the free use of circuits for data-processing purposes.

4. Mutual Connection of Specific Communications Circuits and Public Communications Circuits: In reference to the connection of specific communications circuits and public communications circuits, the individual approval system shall be abolished, and efforts shall be made to enable the connection thereof under the certain standards to be prescribed by a Postal Services Ministry ordinance. Moreover, the connection of public communications circuits, specific communications circuits, and public communications circuits can be secured with approval, though it has not been approved up until now.

5. Connection to Electronic Computers, Etc., to Be Installed by Others: Connection to electronic computers to be installed by contractors under the use-by-others system and to electronic computers, etc., to be installed by others involved in the contracts can be secured if it comes under the certain standards to be prescribed by a Postal Services Ministry ordinance, or if it obtains individual approval.

6. Installation of Input and Output Equipment, Etc.: The Public Corporation or companies can offer input and output equipment, etc., to contractors for the use of specific communications circuits or contractors for the use of public communications circuits.

Supplementary Note: When the Public Tele-Communications Law is partially revised, in order to consolidate the use of data communications circuits, the strengthening of the Penal Regulations, which is an urgent task, shall be carried out.

(1) In regard to persons who engage in public tele-communications services, the provisions of the Penal Regulations concerning their obligation to preserve secrets shall be strengthened.

(2) The amounts of fines, mentioned in the Penal Regulations, shall be revised.

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[25 Feb 82 p 3]

[Text]

MITI on the 24th formulated an opinion of criticism, to the effect that the general outline of a Public Tele-Communications Law revision bill, drawn up by the Postal Services Ministry in connection with the problem of liberalizing data communications, "is still far from liberalization." MITI says that if the Postal Services Ministry's draft plan

is to be followed, then problems will remain as to the following points: (1) The scope of liberalization is indefinite; therefore, there is the fear that depending on how it is operated, it may violate the Provisional Administrative Affairs Research Council's recommendation calling for the liberalization of data communications, as a general principle; and (2) this will prove disadvantageous for the processing of information by medium and small enterprises, which are unable to have their own computers, when compared with big enterprises. MITI will strongly request the improvement of these points in the course of the Postal Services Ministry's drawing up a draft revision bill, from now. But the Ministry is not changing its posture of revising the Law along the line of its general outline. For this reason, further complications are expected before early March, when a final decision is expected to be reached on the revision bill.

Data communications mean the processing of information through the direct connection of computers and communications functions, as in the case of the on-line systems of banks. Due to the vigorous renewal of technology and the appearance of new forms of services in rapid succession, voices calling for the liberalization of the use [of data communications circuits] have become stronger, centering on the enterprises and information-processing services business-persons who use computers. In response to this request, the Postal Services Ministry drew up its revision-bill general outline on the 24th. In regard to the general outline, MITI points out that there are concrete problems as to the liberalization of "message exchange" and "use by others."

Message exchange means the transmitting of information as is, without changing the contents thereof, as in the case of the telephone, even if it goes through a computer. Data communications for processing large amounts of information will inevitably include message exchange. However, the contents of the Postal Services Ministry's draft plan are such that depending on how the Postal Services Ministry Ordinance is operated, message exchange can be restricted, in actual substance. The stand of MITI is that there is fear of its violating the Provisional Administrative Affairs Research Council's recommendation which emphasizes that "message exchange should be liberalized, in principle."

Use by others means that information-processing enterprisers will lease circuits from the Nippon Telegraph and Telephone Public Corporation (NTT) and sub-lease them to other enterprises. The main objects for the joint use of communications circuits by two or more companies are big enterprises, while [those for use by others] are medium and small enterprises which are unable to have their own computers. However, under the Postal Services Ministry's draft plan, use by others will be restricted strictly, compared with joint use. MITI says, "For example, when trying to establish business contacts by telegram through the use of data communications circuits, it will not be permitted in the case of use by others, though it will be possible, in the case of joint use. There is the fear that this may cause gaps in information

services, which can be used, between medium and small enterprises and big enterprises.

* * * * *

Prime Minister Orders Co-ordination of Views between MITI and Postal Services Ministry -- Data Communications

Postal Services Minister MINOWA called on Prime Minister SUZUKI at the Prime Minister's Official Residence on the 24th, and explained the outline of the Ministry's draft of a Public Tele-Communications Law concerning the liberalization of the use of data communications circuits, which draft was submitted to the LDP Communications Department on the same day. In this connection, the Prime Minister ordered the continuation of studies between MITI and the Postal Services Ministry as to high-level communications services and other parts on which co-ordination has still not been carried out between the two sides. Moreover, concerning the part which is included in the Provisional Administrative Affairs Research Council's second recommendation, but which is excluded from the Postal Services Ministry's draft plan this time, the Prime Minister presented a request, saying, "I want you to explain it fully to the Provisional Administrative Affairs Research Council."

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CSO: 4106/90

SCIENCE AND TECHNOLOGY

TOYOTA-GM TIE-UP FOR JOINT U.S. PRODUCTION

Tokyo THE DAILY YOMIURI in English 2 Mar 82 p 1

[Text]

Toyota is the world's second largest automaker next to GM.

The spokesman said an agreement to begin negotiations on details of the proposed tie-up was reached after Eiichi Toyoda, president of Toyota, met in New York with GM Chairman Roger B. Smith late in February.

During the Toyoda-Smith talks, the GM chairman came up with the proposal for possible cooperation in the production of small cars in the US, the spokesman said.

He declined to comment on details of the two executives' talks.

According to reliable sources, the most likely plan to be approved under the accord calls for production of small car models developed by Toyota at an idle GM factory in the US, at an annual rate of 400,000 to 500,000 units.

If realized, the proposed tie-up between the two auto giants would do much to ease the ever-growing friction in the Japan-US trade relations, said officials of the International Trade and Industry Ministry.

The Toyota-GM joint production plan will also pose a great threat to business prospects at home and abroad of Nissan Motor Company, the nation's No 2, auto manufacturer, and other Japanese carmakers.

It is possible that the

envisioned tie-up could eventually lead to domination of the world's car markets by the two giants, according to industrial sources.

A common reaction among Toyota's domestic rivals was that what they had most feared was about to become reality.

GM produced a total of 4,600,000 trucks and passenger cars in 1980 in the US, securing 44.5 percent of motor vehicle sales on the US market.

With eight manufacturing subsidiaries and 14 assembling subsidiaries abroad, GM already has capital tie-ups with Japan's Isuzu Motors and Suzuki Motor Company.

Toyota, whose output in 1980 reached about 3,100,000 units, was reluctant to locate its own plants in the US, on the ground that such plans as being pushed by other Japanese carmakers would do little to help ease the jobless problem of the slump-stricken US car industries.

Instead of branching out itself in the US, Toyota had been looking for a US carmaker since late last year with which to form partnership in the production of Toyota cars in the US, according to the sources.

Indications were that the latest top-level Toyota-GM meeting was held when Toyoda visited Smith after attending a sales promotion meeting of Toyota dealers in Canada in early

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February.

Based on the broad agreement reached in the Toyoda-Smith talks, the two companies will shortly start negotiations on details of the projected joint production, including the form of a joint enterprise, the types of cars to be produced and when to start production, the sources said.

Citing probable reasons for Toyota's decision to join hands with GM, the sources said GM has formidable technological strength for development of new cars and Toyota could benefit much from exchanges of technical know-how with GM.

GM, on its part, was considered to have okayed the tie-up with Toyota in view of the unexpectedly poor sales of the GM-developed "J" car series and resultant closure of some of GM factories.

The world's top carmaker also might have taken into account that cars being produced under its existing tie-ups with Isuzu and Suzuki are restricted to mini-cars with engine displacements from 1,000 to 1,300 cc, the sources noted.

GM, therefore, might have hoped that a tie-up with Toyota would make it possible to produce 2,000 cc-class cars through joint production, they said.

The envisioned Toyota-GM joint production, however, is expected to encounter difficulties because of the US antitrust regulations which ban a merger or a joint venture in an industry where the four largest companies as a group hold 75 percent or more of the domestic market, if one party to the merger or joint venture has a market share of 15 percent or more (GM has 44.5 percent) and the other party has a market share of one percent or more (Toyota has 6.8 percent).

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